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ABSTRACT

Application forms for the Basic Educational Opportunity Grant (BEOG) program for 1976-1977 were compared to 1975 tax forms filed with the Internal Revenue Service (IRS). Comparisons were also made to data from a similar 1974-1975 study. Based on a sample of 212,263 applicants, findings include the following: during 1976-1977, 70.7 percent of all regular applicants in the sample reported adjusted gross incomes that were within $50 of IRS-reported data; low income applicants were less accurate in reporting income to the BEOG program than higher income applicants; household size were accurately reported by 89.9 percent of applicants; eligible applicants were at least three times more likely to underreport their incomes to the BEOG program by more than $5,000 than were ineligible applicants; almost 70 percent of all regular applicants' IRS-based Student Eligibility Indexes (SEIs) were within 50 points of their BEOG SEIs; and 17.7 percent of all very low income applicants (below $1,000) evidenced IRS-based SEIs that were 800 points or more higher than their BEOG SEIs. Information is also provided on: the reporting of negative income, responses to processing edits and corrections, dependent students' income, and the utility of selected validation criteria used in BEOG pre-award validation. (SW)

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1976-77 INTERNAL REVENUE SERVICE COMPARISON STUDY

FINAL REPORT

August 16, 1979

Prepared for:

Bureau of Student Financial Assistance
U.S. Office of Education
Department of Health, Education, and Welfare

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THE ACCURACY OF BEOG-REPORTED ADJUSTED GROSS INCOME: A COMPARISON OF THE 1974-75 AND 1976-77 IRS/BEOG COMPARISON STUDIES

- Between 1974-75 and 1976-77, low income applicants (<$4,000) evidenced a modest increase in the accuracy of BEOG-reported adjusted gross income (63.0% versus 64.9%); middle income applicants ($4,000 - $10,000) exhibited relatively stable rates of reporting accuracy; upper income applicants showed slight decreases in the accuracy of BEOG-reported adjusted gross income (see Table 3.1, page 3.3). A summary of the comparison of the 1974-75 and 1976-77 studies is presented in the following table:

Accuracy of BEOG-Reported Adjusted Gross Income	Total		Eligible Applicants		Ineligible Applicants	
	1974-75 %	1976-77 %	1974-75 %	1976-77 %	1974-75 %	1976-77 %
Under-reported (IRS>BEOG)	13.6	27.2	26.5	22.6	8.4	18.8
Accurate (±$200)	81.5	76.8	77.7	69.9	86.7	84.8
Over-reported (BEOG<IRS)	5.4	6.7	5.8	7.5	4.9	6.8

- Between 1974-75 and 1976-77, independent students exhibited increases in the accuracy of adjusted gross income relative to dependent students. In 1974-75, accuracy rates for dependents and independents were 84 percent and 65.4 percent, respectively. In 1976-77, the comparable rates were 77.5 percent and 72.7 percent, respectively (see Table 3.4, page 3.7).

DETAILED 1976-77 IRS/BEOG DISCREPANCIES

adjusted gross income-

- During 1976-77, 70.7 percent of all regular Basic Grant applicants for whom IRS/BEOG matches were obtained reported adjusted gross incomes which were within ±$50 of IRS-reported data. Low income applicants were less accurate than higher income applicants -- almost 12 percent of all applicants reporting less than $1,000 in adjusted gross income to BEOG evidenced IRS adjusted gross incomes at least $5,000 higher (see Tables 4.1, 4.2, pages 4.2, 4.5).
- 1976-77 eligible applicants were at least three times more likely to underreport their incomes to the Basic Grant program by more than $5,000 than were ineligible applicants (4.9% versus 1.5%, respectively) (see Table 4.2, page 4.5).

federal income taxes-

- Higher income applicants were more likely to misreport their federal income taxes than low income applicants. This was particularly so for eligible applicants. Among eligible applicants earning in excess of $17,500 a year, 13.1 percent overreported taxes by more than $500 and 6.7 percent underreported by this amount. For ineligible applicants in this income group, the comparable proportions were 6.8 percent and 7.9 percent, respectively (see Tables 4.7 and 4.8, pages 4.12, 4.13).

household sizes-

- Household size were accurately reported (± 1 person) by 89.9 percent of all regular Basic Grant applicants. The number of tax exemptions reported to BEOG and IRS evidenced even greater comparability with more than 92 percent of all regular applicants reporting tax exemptions to BEOG that were within ±1 of the number of exemptions reported to IRS (see Tables 4.10 and 4.13, pages 4.17, 4.21).

impact on eligibility indices-

- Substituting IRS-reported adjusted gross income and federal tax data for BEOG-reported data, almost 70 percent of all regular applicants' IRS-based SEIs were within ±50 points of their BEOG SEIs. However, 17.7 percent of all very low income applicants (≤$1,000) evidenced IRS-based SEIs which were 800 points or more higher than their BEOG SEIs. Further, eligible applicants, particularly in the high income ranges, were two to four times more likely to have IRS-based SEIs which exceeded their BEOG SEIs by 200 or more points than to have BEOG SEIs which exceeded IRS-based SEIs by the same magnitude (see Tables 4.17, 4.19, pages 4.27, 4.25).

supplemental applicants-

- Overall, almost one-third (31.2%) of all supplemental applicants exhibited IRS-based SEIs which exceeded their BEOG SEIs by more than 800 points (22.2%, eligible dependents; 30.5% eligible independents; 26.1%, ineligible dependents; 3815% ineligible independents) (see Table B.17).

SPECIAL ISSUES RELATED TO QUALITY CONTROL

IRS/BEOG federal income tax discrepancies-

- Inconsistencies between BEOG-reported federal income taxes and federal income taxes computed by the BEOG application processor are good indicators of problematic application data. Among the estimated 204,611 regular Basic Grant applicants

whose BEOG-reported federal taxes differed by $400 or more from computed taxes, 24.3 percent exhibited IRS-based SEIs which were more than 400 points higher than their BEOG SEIs of record (see page 5.3).

the reporting of negative income-

- Whereas the "tax inconsistency" criterion was shown to be indicative of misreporting, such was not the case with the negative income criterion. Most applicants reporting negative incomes exhibit IRS-based SEIs which are very close to their BEOG SEIs of record. Further, very few applicants (1.9%) reporting negative incomes exhibited IRS-based SEIs that were substantially larger ($\geq$ 400 points) than their BEOG SEIs (see page 5.5)

response to processing edits and SER corrections-

- Individuals who submitted SER corrections that result in substantial reductions in their SEIs exhibited IRS-based SEIs that were much more likely to be discrepant from their BEOG SEIs than individuals who did not submit corrections. More than 22 percent of those applicants submitting SER corrections resulting in SEI decreases of 400 or more points exhibited IRS-based SEIs which were 400 or more points higher than their BEOG SEIs of record (see page 5.9)
- Applicants requiring income assumptions to be made by the BEOG processor exhibited 3 times the rate of discrepant IRS/BEOG SEIs (IRS based SEIs 400 or more points higher than BEOG SEIs) as did applicants who did not require assumed incomes (see page 5.11)
- Applicants who changed adjusted gross income data in response to processing edits were no more accurate in the reporting of this information than applicants who changed income data without the prompting of income-related edits (see page 5.14).

ANALYSIS OF DEPENDENT STUDENT INCOME

- An estimated 33 percent of all eligible dependent Basic Grant applicants filed 1976 tax returns with adjusted gross incomes of greater than $1,000. Further, an estimated 12 percent of all eligible dependent applicants reported adjusted gross incomes of at least $3,000. Some of this money may have been considered in the determination of Basic Grant eligibility where it was reported by students as "applicant resources" (p. 6.2).
- Four models for estimating the impact that dependent student income would have on Basic Grant eligibility were tested, involving different treatments of this income and applicants

resources. The models had differing impact on the students income depending on the algorithms used. One important finding was to confirm the fact that dependent students have more resources than expected to contribute to the cost of their education. (p. 6.11)

1

INTRODUCTION

Background

In its continuing effort to oversee the integrity of the Basic Educational Opportunity Grant (BEOG) program and to disburse financial assistance in accordance with existing legislation and program regulations, the Bureau of Student Financial Assistance (BSFA) has, for the past several years, undertaken a series of analytic studies to monitor the accuracy of information reported on Basic Grant application forms. One of the most important of these efforts has been BSFA's comparison of Basic Grant applications with tax returns filed with the Internal Revenue Service (IRS). Because critical Basic Grant application data should be identical to information reported to IRS, comparison of IRS and BEOG data provides a reasonably detailed assessment of the accuracy of information provided on Basic Grant applications and, in turn, the extent to which Basic Grant funds may be disbursed in accordance with legitimate applicant need.

Two IRS/BEOG comparison studies have been conducted to date. The first of these was conducted in 1976 and compared 1974-75 Basic Grant applications with 1973 Federal income tax returns.[1/] The second

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1/ Kuchak, JoAnn, Internal Revenue Comparison Study, prepared pursuant to Office of Education Contract No. 300-75-0227 for the Division of Basic and State Student Grants, Applied Management Sciences, Inc., 1976.

IRS/BEOG comparison compared 1976-77 Basic Grant applications with 1975 Federal income tax returns. The results of this study are the subject of this report.

There were basically four objectives that guided the 1976-77 IRS/BEOG Comparison Study:

- Replication of the 1974 IRS/BEOG Comparison Study

  A primary objective of the current comparison study was to replicate several of the analyses of the 1974 study to assess the degree to which the accuracy of Basic Grant application data has changed over the intervening years.

- Detailed analysis of 1976 IRS/BEOG discrepancies

  In addition to replicating previous comparative analyses, the current study was also developed to produce detailed information concerning recent trends in application accuracy.

- Special issues related to quality control

  By examining selected characteristics of students whose applications were substantially at variance with IRS records, criteria may be established for directing future validation efforts or issue areas may be identified which could focus BSFA attention on areas of the Basic Grant program that are in need of additional management and/or regulation.

- Investigation of income earned by Basic Grant applicants filing as dependents

  Current Basic Grant reporting requirements do not specifically include the earned income of dependent applicants in the determination of Basic Grant eligibility. Analyses were conducted to determine the number of dependent students who earned taxable income, the amounts of this income, and the effect this income would have on Student Eligibility Indices (SEIs) if it were considered in the calculation of grant eligibility according to four models of computing dependent income contributions to family resources.

Report Organization

Following a discussion of the study methodology (Chapter 2), the results of the 1976-77 IRS/BEOG Comparison Study are presented in four chapters each addressing a specific study objective. Chapter 3 presents a comparison of 1976 data with those obtained from the 1974-75 study. Detailed analyses of the 1976-77 IRS/BEOG discrepancies are

discussed in Chapter 4. Chapter 5 examines characteristics of applicants whose applications were discrepant with data provided to IRS. Finally, Chapter 6 reviews the issue of dependent student income. Each of these chapters is supported by several appendices referenced in the Table of Contents.

2

METHODOLOGICAL OVERVIEW

Study Design

The design of the 1976 IRS/BEOG Comparison Study was similar to that implemented for the 1974 study. Applied Management Sciences, in collaboration with the American College Testing Program, selected a probability sample of all individuals who applied for a Basic Grant during the 1976-77 application year. This sample was then matched, through the cooperation of the Internal Revenue Service, with federal income tax records for the 1975 tax year. Selected items from the Basic Grant applications and tax forms were then merged to establish an analytical data base that permitted comparisons of data reported on the two forms as well as the means to recalculate student eligibility indices by substituting IRS data for BEOG application data.

Study Samples

Two study samples were selected for the 1976-77 IRS Comparison Study. One involved all regular Basic Grant applicants; the other, all supplemental Basic Grant applicants. Both samples were deeply stratified probability samples. Variables used to define strata for both samples included:

- eligibility status
  - .. eligible applicants
  - .. ineligible applicants

- corrections status
  - .. no corrections
  - .. one to three corrections
  - .. four or more corrections
- dependency status
  - .. dependent
  - .. independent
- income level (as reported to BEOG)
  - .. less than 1000
  - .. 1000-1999
  - .. 2000-3999
  - .. 4000-6999
  - .. 7000-9999
  - .. 10,000-12,499
  - .. 13,000-14,999
  - .. 15,000-17,499
  - .. 17,500 or more

In addition, the supplemental applicant sample was initially stratified by the reason justifying the submission of a supplemental application:

- type of supplemental application
  - .. regular applicant (no supplemental application)
  - .. divorce
  - .. death
  - .. unemployment
  - .. disability
  - .. applicant unemployment
  - .. other

Records were selected from each stratum for which cases were available such that stratum-specific estimates could be generated with a maximum variance of ± 5 percent with a 95 percent level of confidence. This sampling strategy resulted in a prematch sample

of 212,263 BEOG applicants from a universe of over three million. The following text table highlights the distribution of the sampled characteristics and type of application and eligibility status. It should be noted that disproportionate sampling was used to guarantee accurate estimates on eligibles.

Application Type Dependency Status and Eligibility Status	Universe	% of All BEOG Applicants	Sample	% of Applicant Sample
Regular Applicants				
• Eligible				
.. dependent	1,368,560	39.5	98,286	46.3
.. independent	804,198	23.2	62,326	29.3
• Ineligible				
.. dependent	760,524	21.9	13,273	6.2
.. independent	325,959	9.4	11,888	5.6
Supplemental Applicants				
• Eligible	109,048	3.1	18,065	8.5
• Ineligible	96,415	2.7	8,425	3.9
Total	3,464,704	100.0	212,263	100.0

Results of BEOG/IRS Match Procedure

Of the 212,263 BEOG cases sampled, IRS matches were obtained for 68.7 percent (145,859). A match was defined as the concurrence of parent's social security number (or applicant's SSN in the case of independent students) and the first two letters of the parents' last name (or applicants' last name in the case of independent students). This match rate represented a significant improvement over the 1974-75 study in which matches were obtained for only 55 percent of the sampled cases.[1/]

[1/] One reason for the increase in IRS/BEOG matches was the fact that in the 1974-75 study, many dependent applicants failed to include their parent's SSN on their applications. In the 1976-77 study, substantially more dependent applications reported parent SSNs.

Of the cases for which IRS matches could not be obtained, 71 percent (47,589 of 67,026) were among applicants reporting annual incomes of less than $4,000 to BEOG. The primary reason, therefore, for the relatively large number of Basic Grant applications for which no IRS match could be established is the strong likelihood that the low income applicants failed to file income tax returns. The consequences of the relatively low match rate among low income applicants for the validity of the IRS/BEOG Comparison Study are discussed in a later section of this chapter (see *Study Limitations, p. 2.6).*

A general comparison of 1974-75 and 1976-77 IRS/BEOG match rates by selected variables is presented in Table 2.1. More detailed data on the match rates for the 1976-77 study can be found in Appendix C.

Study Variables

Variables selected from tax returns for consideration in this study included:

- adjusted gross income
- federal income tax
- number of exemptions
- filing status
- date of filing

From the Basic Grant application form, consideration was given to the following variables:

- all data elements that are included in the calculation of award eligibility
- corrections
- presence/absence of edit comments
- rejection/non-rejection of initial application
- date of application
- applicant's year in school

However, the low match rate among low income applicants is of concern. As latter study results will indicate, low-income applicants are among the least accurate of the applicant groups considered. In general, inaccuracies tend to be in the direction of underreporting income data to BEOG. This means, to some degree, that the low income applicants for whom IRS records were matched are not really "low income" applicants at all. Further, because the most likely reason for the low match rate among low-income BEOG applicants is that many actually did not earn enough taxable income to require the filing of a tax return, there is also the strong possibility that the no-match low income applicants are more accurate in filling out BEOG applications than their "matched" counterparts.

The points raised in the preceding paragraphs imply, therefore, that data from the 1976-77 IRS Comparison Study are likely to overstate the extent to which misreporting occurs among so-called low income applicants. From a statistical perspective, this possibility should be considered in the interpretation of study data. From a quality assurance perspective, however, the potential statistical bias is a relatively minor issue. This is because if a particular group is found to frequently misreport BEOG application data, it matters little if the "true" incidence of misreporting has in fact been ascertained.[1/]

1/ It should be pointed out, however, that even though low income applicants, at least those for whom BEOG/IRS matches were established, frequently misreport BEOG information, this does not automatically imply that this group should be targeted for validation. As previous validation experience has indicated, corrections to SERs submitted by low income applicants have very little effect, on the average, on their eligibility indices. From the standpoint of optimal allocation of quality assurance resources, validation of applicants simply because they report very low incomes will likely cost more than the potential program savings that might be realized.

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Analytical Approaches

All data analyses in this report were conducted through two- and four-way contingency analysis. No inferential tests of significance or measures of statistical association were examined. All data, except where noted, are weighted, and every given estimate has a statistical variance no greater than ±5 percent (usually much less).

Issues of Data Confidentiality

Any investigation that involves the personal affairs of citizens must be conducted in such a manner as to protect the individual's right of privacy. Even though Basic Grant applicants agree to provide any data, including tax returns, to the U.S. Office of Education to verify application data, the 1974-75 and 1976-77 IRS/BEOG Comparison Studies were conducted in a way that precluded the linking of individuals to study data. This was assured through a rather complex automated data processing procedure in which the final data file containing matched BEOG and IRS records were devoid of all personal identifiers. Consequently, the IRS/BEOG Comparison Studies were strictly statistical studies to provide an overview of the accuracy of data upon which awards were distributed. These studies were neither validation nor compliance efforts, nor is there any way the study data could be used for these purposes.

Limitations of Study Data and Study Biases

The most serious limitation of the 1976-77 IRS/BEOG study data is the relatively large number of applicants for whom no IRS match was obtained for their Basic Grant application. As in the 1974-75 study, analyses were undertaken to determine if the "no match" group differed in any appreciable way from the match group. The results of the analysis indicated that there is little reason to believe that one group differs from the other with respect to key study variables.

An important issue which is not related to study bias but nevertheless limits the utility of study findings is the fact that BSFA implemented major system revisions for the 1978-79 program year. These revisions included substantially revised application processing edits. Data have indicated that these revised edits have been relatively effective in identifying inaccurate BEOG application information. The 1976-77 IRS Comparison Study investigated applications submitted prior to the implementation of these new processing edits and therefore there is reason to believe that study data may overstate the frequency and magnitude of misreporting relative to the current 1977-78 situation.

A final bias that should be noted is the perspective of the evaluator. The 1976-77 IRS/BEOG Comparison Study data have been analyzed to emphasize, to a large extent, the inaccuracies in BEOG application data and the negative consequences these inaccuracies have for the disbursement of Basic Grant funds. This perspective should not be allowed to overshadow the fact that nearly four out of five of all Basic Grant applicants accurately report their personal and financial circumstances and many of those who don't report accurately may do so unintentionally.

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Another potential source of study bias concerns the fact that dependent students were not required to report their parent social security numbers on their BEOG applications. Consequently, the match rates among dependent students referred to in this study pertain only to those applicants who reported their parent social security numbers. While there is no reason to suspect that dependent students who don't report parent social security numbers differ appreciably from those that do, there is no way to know for certain that rates and magnitude of misreporting between these two groups is comparable.

Further, it is possible that students whose parents were divorced or separated reported the social security number of the parent not responsible for their educational support under existing Basic Grant regulations. Consequently, IRS/BEOG matches may, in a few instances, compare the "wrong" parent data. It is doubtful, however, whether this occurred with any frequency, and it almost certainly did not occur often enough to seriously compromise study findings.

Another bias of the 1976-77 IRS/BEOG study occurs in the recalculation of SEIs based on the substitution of IRS data for BEOG application information. IRS-reported exemptions were available to approximate the effect of family size offsets in this calculation. However, tax exemptions do not necessarily reflect the actual number of persons in a given household. Therefore, despite the fact that previous validation effects have indicated substantial misreporting with respect to household size, a decision was made to present SEIs recalculated only on the basis of adjusted gross income and federal income taxes. These latter items should be, in most cases, exactly comparable on IRS tax returns and Basic Grant applications.[1/] As a result of this decision, the number and magnitude of discrepancies between IRS and BEOG SEIs will likely be understated. Due to the importance of these SEI recalculations, though, a conservative understatement of the impact of misreporting in the BEOG program was judged to be preferable to reporting discrepancies that may be, at worst, overstatements of the effects of misreporting.

1/ IRS-reported federal taxes may, in a few instances, include self-employment taxes, uncollected FICA taxes, etc. Therefore, there may be a few cases in which IRS-reported taxes do not exactly equal BEOG-reported federal income taxes.

3

THE ACCURACY OF BEOG-REPORTED ADJUSTED GROSS INCOME: A COMPARISON OF THE 1974-75 AND 1976-77 IRS/BEOG COMPARISON STUDIES

The purpose of this brief chapter is to indicate changes that were observed in the accuracy of BEOG-reported adjusted gross income (AGI) and other application data between the initial 1974-75 IRS/BEOG Comparison Study and its 1976-77 replication.

Definitions of accurate reporting parallel those used in the 1974-75 IRS Comparison Study. Restating this, an IRS/BEOG difference of ± $200 (or ± 200 SEI points) is considered "accurate"[1/] reporting and all values outside this range are considered discrepant. Under-reporting occurs when the IRS value is less than the BEOG value. In all instances, the estimates presented in this report are based upon weighted values and pertain only to regular Basic Grant applicants.

AGI Discrepancies

It was found that in the 1976-77 study, 76 percent of the applicants for whom IRS records were found had no significant discrepancy between the amount reported to BEOG and to IRS. It appears that the majority of BEOG applicants tend to maintain a high accuracy rate even though this rate represents a decrease in overall accuracy of 5.5 percent from the 1974-75 study. A marked 4.2 percent of this decrease in accuracy is represented by applicants who under-report.

1/ The $200 value was used in the 1974-75 study because discrepancies of this magnitude were judged not to significantly impact upon actual award amount. The 200 student eligibility index point range was used in this chapter for comparative purposes.

TABLE 3.1: ACCURACY OF ADJUSTED GROSS INCOME FOR ALL BEOG APPLICANTS IN PERCENTS

		BEOG Reported AGI (1974-1975)						
	Total	Less than $4,000	$4,000-$6,999	$7,000-$9,999	$10,000-$12,499	$12,500-$14,999	$15,000-$17,499	$17,500+
Under-Reported (IRS>BEOG)	13.0	29.0	15.5	15.8	13.6	8.5	9.0	6.7
Accurate (±$200)	81.5	63.0	74.8	77.9	81.4	87.6	86.9	89.0
Over-Reported (IRS<BEOG)	5.4	8.0	9.7	6.3	5.0	4.0	4.1	9.3
Total	99.9	27.9	14.4	14.8	12.2	11.3	7.9	11.5

		BEOG REPORTED AGI (1976-1977)						
	Total	Less than $4,000	$4,000-$6,999	$7,000-$9,999	$10,000-$12,499	$12,500-$14,999	$15,000-$17,499	$17,500+
Under-Reported (IRS>BEOG)	17.2	28.6	15.3	15.6	16.9	12.7	12.5	9.1
Accurate (±$200)	76.0	64.9	75.8	77.0	77.0	82.1	82.3	84.3
Over-Reported (IRS<BEOG)	6.7	6.4	8.9	7.4	6.1	5.2	5.2	6.6
Total	99.9	24.4	16.0	13.8	10.3	9.5	8.8	17.1

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Comparing changes in under-reporting between eligible and ineligible applicants, it is seen that the largest increases in discrepancies occurred for 1976-77 eligible applicants. The following text table provides an overview of these data.

Accuracy of BEOG-Reported Adjusted Gross Income	Total		Eligible Applicants		Ineligible Applicants	
	1974-75 %	1976-77 %	1974-75 %	1976-77 %	1974-75 %	1976-77 %
Under-reported (IRS>BEOG)	13.0	17.2	16.5	22.8	8.4	10.0
Accurate (±$200)	81.5	76.0	77.7	69.9	86.7	84.0
Over-reported (BEOG>IRS)	5.4	6.7	5.8	7.3	4.9	6.0

When the accuracy of reported AGI is examined in terms of income level, all BEOG applicants with less than $4,000 annual taxable income exhibited a minor increase in reporting accuracy between 1974-75 and 1976-77. The middle income range ($4,000 to $9,999) applicants also exhibited a similar stability in reporting while applicants with incomes of more than $10,000 showed reduced accuracy. Table 3.1 presents the comparative accuracy rates for all (eligible and ineligible) applicants at various income levels.

When the rate of accuracy is examined by eligibility status and income level, the 1976-77 study found that 69.9 percent of the eligibles and 84.0 percent of the ineligibles were accurate in reporting their income level. These rates were slightly lower than the rates obtained in the previous study (77.7 and 86.7 percent, respectively). The largest discrepancies were observed among applicants who under-report rather than over-report. Relative to income level, Tables 3.2 and 3.3 indicate that the accuracy of reporting has increased among eligible and ineligible applicants earning less than $4000 a year. Reporting accuracy has generally decreased among eligible and ineligible applicants in the higher income ranges with the largest declines in accuracy occurring among eligibles reporting incomes in excess of $17,500 a year. This is a particularly noteworthy finding given the extension of Basic Grant eligibility to higher income applicants in 1979-80.

TABLE 3.3: ACCURACY OF ADJUSTED GROSS INCOME FOR INELIGIBLE APPLICANTS

		BEOG Reported AGI (1974-1975)						
	Total	Less than $4,000	$4,000-$6,999	$7,000-$9,999	$10,000-$12,499	$12,500-$14,999	$15,000-$17,499	$17,500+
Under-Reported (IRS>BEOG)	8.4	18.0	8.4	9.3	9.0	6.5	8.5	6.6
Accurate	86.7	76.3	81.8	84.8	86.5	89.8	87.7	89.2
Over-Reported (IRS<BEOG)	4.9	5.7	9.8	5.9	4.6	3.8	3.8	4.2
Percent of Total	100.0	6.9	9.1	9.7	12.6	18.8	16.5	26.5

		BEOG Reported AGI (1976-1977)						
	Total	Less than $4,000	$4,000-$6,999	$7,000-$9,999	$10,000-$12,499	$12,500-$14,999	$15,000-$17,499	$17,500+
Under-Reported (IRS>BEOG)	10.0	15.8	9.3	8.3	10.8	9.5	11.1	8.7
Accurate	84.0	78.3	84.0	84.8	83.5	85.6	84.2	84.7
Over-Reported (IRS<BEOG)	6.0	5.9	6.6	6.9	5.7	5.0	4.7	6.6
Percent of Total	100.0	9.3	9.7	8.6	8.6	12.2	14.3	37.3

3.5

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TABLE 3.2: ACCURACY OF ADJUSTED GROSS INCOME FOR ELIGIBLE APPLICANTS

	Total	Less than $4,000	$4,000-$6,999	$7,000-$9,999	$10,000-$12,499	$12,500-$14,999	$15,000-$17,499	$17,500+
				BEOG Reported AGI (1974-1975)				
Under-Reported (IRS>BEOG)	21.2	31.5	18.1	18.3	17.2	13.3	13.0	11.3
Accurate	77.7	59.9	72.2	75.2	77.4	82.2	81.1	81.0
Over-Reported	7.5	8.6	9.7	6.5	5.4	4.5	5.9	7.7
Percent of Total (IRS<BEOG)	100.0	27.3	23.4	23.9	15.3	7.4	2.1	.5
				BEOG Reported AGI (1976-1977)				
Under-Reported (IRS>BEOG)	22.8	31.2	17.5	18.3	20.4	16.8	15.8	17.4
Accurate	69.9	62.1	72.8	74.1	73.3	77.6	78.0	75.3
Over-Reported	7.3	6.6	9.7	7.6	6.3	5.6	6.2	7.3
Percent of Total (IRS<BEOG)	100.0	36.1	20.9	17.9	11.7	7.4	4.6	1.4

3.4

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TABLE 3.4: ACCURACY OF ADJUSTED GROSS INCOME FOR DEPENDENTS AND INDEPENDENTS FOR ALL BEOG APPLICANTS

	1974-1975			1976-1977		
	Total	Dependent	Independent	Total	Dependent	Independent
Under-Reported (IRS>BEOG)	13.0	11.3	24.4	17.2	15.8	20.5
Accurate	81.5	84.0	65.4	76.0	77.5	72.7
Over-Reported (IRS<BEOG)	5.4	4.7	10.2	6.7	6.7	6.8
Total	99.9	86.6	13.4	100.0	70.4	29.6

ELIGIBLE APPLICANTS

	1974-1975			1976-1977		
	Total	Dependent	Independent	Total	Dependent	Independent
Under-Reported (IRS>BEOG)	16.5	14.0	32.0	22.8	20.8	27.0
Accurate	77.7	80.8	58.3	69.9	71.6	66.4
Over-Reported (IRS<BEOG)	5.8	5.2	9.6	7.3	7.6	6.7
Total	100.0	86.4	13.6	100.0	67.2	32.8

INELIGIBLE APPLICANTS

	1974-1975			1976-1977		
	Total	Dependent	Independent	Total	Dependent	Independent
Under-Reported (IRS>BEOG)	8.4	7.6	13.6	10.0	10.1	9.9
Accurate	86.7	88.4	75.4	84.0	84.3	83.1
Over-Reported (IRS<BEOG)	4.9	4.0	10.9	6.0	5.7	7.0
Total	100.0	87.0	13.0	100.0	74.4	25.6

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AGI Discrepancies Associated with Dependency Status

When the accuracy of AGI is examined in terms of applicant dependency status, independents show a lower accuracy rate than dependents regardless of eligibility status. It is noteworthy, however, that ineligibles show less discrepancy as a function of dependency status than eligible applicants.

This trend is apparent in the 1974-75 study with the exception that there was a greater disparity between dependent and independents' accuracy rates. The 1974-75 study revealed independents to be far less accurate across eligibility status. The gap between dependent and independent accuracy rates in the 1976-77 study has become less disparate indicating that independents are reporting more accurately than previously, while dependents exhibited an increase in misreporting. Table 3.4 summarizes these data.

Federal Income Tax Discrepancies

A comparison of the accuracy of tax data reported on BEOG applications between the 1974-75 and 1976-77 application years revealed trends in accuracy similar that those noted for adjusted gross income. As the following text table indicates, a decrease in the overall accuracy of tax data was observed for eligible as well as ineligible applicants.

Accuracy of BEOG-Reported Federal Income Taxes	Total		Eligible Applicants		Ineligible Applicants	
	1974-75 %	1976-77 %	1974-75 %	1976-77 %	1974-75 %	1976-77 %
Under-reported (IRS>BEOG)	13.3	11.3	14.0	12.5	12.6	9.8
Accurate (± 200)	76.9	76.4	75.0	74.3	78.9	77.5
Over-reported (BEOG>IRS)	9.8	12.4	11.0	13.1	8.4	12.6

The decrease in the accuracy of BEOG-reported tax information occurred among eligible as well as ineligible applicants with the

Impact of Misreporting on Student Eligibility Indices

The final comparative issue considered in this chapter is the impact of misreporting on Basic Grant eligibility indices. By substituting IRS-reported adjusted gross income and taxes into the eligibility index (SEI) computation algorithm, IRS-based SEIs were compared to BEOG SEIs of record for the two application years under consideration. As might be anticipated from data presented in the preceding discussions, there was a slight increase between the 1974-75 and 1976-77 application years in the proportion of applications for which IRS-based SEIs differed from BEOG SEIs of record. This was particularly so for ineligible applicants. However, as the data in the following text table indicate, SEI discrepancies among ineligible applicants remained relatively evenly divided between those whose IRS-based SEIs would have resulted in increased Basic Grant eligibility and those whose IRS-based SEIs would have resulted in decreased eligibility. On the other hand, IRS-based SEIs among eligible applicants were approximately 5 times more likely to result in decreased rather than increased eligibility for both the 1974-75 and 1976-77 application years.

Substitution of IRS AGI and Tax Data into the Calculation of BEOG SEIs Results in:	Eligible Applicants		Ineligible Applicants	
	1974-75 %	1976-77 %	1974-75 %	1976-77 %
Decreased Award Potential (IRS SEI>BEOG SEI)	12.1	13.2	7.5	9.6
No Change (±200 points)	85.5	84.1	85.6	82.3
Increased Award Potential (BEOG SEI>IRS SEI)	2.4	2.7	7.0	8.1

greater decrease in accuracy occurring among ineligible applicants. Over-reporting of tax information, which favors increased Basic Grant awards, increased 3.1 percent among eligibles and 4.2 percent among ineligibles. It should be recognized, however, that despite the increase in inaccurate reporting of tax information, more than 76 percent of all applicants continued to report tax information that was within ± 200 of taxes actually paid to the Internal Revenue Service.

Household Size Discrepancies

A comparison of the number of tax exemptions claimed on tax returns and the size of an applicant's household as reported on BEOG applications indicated that the accuracy of BEOG household data remained relatively stable between the 1974-75 and 1976-77 application years. While a slight decrease in accuracy of household size data was observed, the overall level of accuracy remained very high. In 1976-77, more than 90 percent of all regular Basic Grant applicants reported household sizes that were within ±1 of their 1976-77 tax exemptions.

As the accompanying text table reveals, however, eligible applicants were three times more likely to over-report household size than were ineligible applicants in both application years reviewed (11.6% versus 3.4% for 1974-75; 12.9% versus 3.8% for 1976-77). Over-reporting household sizes would, of course, increase the amount of a Basic Grant award for which an applicant might be eligible.

Accuracy of BEOG-Reported Household Size	Total		Eligible Applicants		Ineligible Applicants	
	1974-75 %	1976-77 %	1974-75 %	1976-77 %	1974-75 %	1976-77 %
Under-reported (IRS>BEOG)	0.6	1.0	0.9	1.4	0.4	0.6
Accurate (±1)	91.8	90.7	87.5	85.9	96.1	95.5
Over-report (BEOG>IRS)	7.5	8.3	11.6	12.9	3.4	3.8

to be a result of a tendency for high income applicants to under-report their income more frequently than in the past. It should be noted, however, that even though the decline in reporting accuracy is slight, this decrease likely had a significant impact on the amount of money disbursed to students.

Also noteworthy is the behavior of independent and dependent applicants. In the 1974-75 study, independents had far less accurate income data. This disparity has currently been reduced so that independent and dependent students are very similar with respect to their accuracy of information. Experience in using BEOG application forms may have been a factor in improved accuracy among independent applicants.

Conclusions

Based on this analysis the following conclusions can be made:

- Most applicants report accurate adjusted gross incomes, federal taxes, and household sizes on their BEOG application although the rate at which they do this has declined slightly since the 1974-75 study.
- Misreporting on all variables for both 1974-75 and 1976-77 was generally in the direction of increasing potential award amounts. The slight decrease in 1976-77 reporting accuracy was distributed in proportions of over- and under-reporting that were similar to those found in the 1974-75 study.
- Middle and low income range applicants showed the most stability in adjusted gross income accuracy rates from 1974-75 to 1976-77, although low income applicants showed the greatest rate of misreporting among all income categories. This finding must be interrupted cautiously, though, because of the relatively low match rate between IRS records and BEOG applications for low income applicants.
- Applicants reporting incomes in excess of $17,500 a year evidenced appreciable declines in reporting accuracy between the 1974-75 and 1976-77 studies, particularly among eligible applicants. Given new Basic Grant regulations that open Basic Grant awards to "middle income" families, this decline in accuracy of income reporting among higher income BEOG applicants may warrant close monitoring in future quality assurance studies.
- Eligible applicants tend to report adjusted gross income, tax data, and household sizes less accurately than ineligible applicants. This trend is also seen in the previous year study.
- Independents misreport income more often than dependents. However, the gap in their accuracy rates narrowed considerably between 1974-75 and 1976-77.
- As a consequence of the decline in overall reporting accuracy, comparison of IRS-based SEIs with BEOG SEIs between the two study years revealed a slight increase in the proportion of applicants for whom IRS-based SEIs were more than 200 points greater than their BEOG SEIs. In general, therefore, better than 80 percent of all applicants in each study year exhibited comparable IRS/BEOG SEIs.

While overall accuracy of reporting income is lower than it was in the 1974-75 study, it is still high. This slight decrease seems

4

DETAILED 1976-77 IRS/BEOG DISCREPANCIES

The previous chapter provided a brief overview of trends in the accuracy of Basic Grant application data between the time of the first IRS comparison study (1974-75) and the present 1976-77 study. The purpose of this chapter is to provide a more detailed examination of the accuracy of data furnished on 1976-77 applications. The specific application items that were examined included adjusted gross income, federal income taxes, household size, and federal tax exemptions. In addition, an analysis is presented of SEI changes that result from substituting IRS-reported information for BEOG-reported data in the calculation of SEIs. Each of these analyses is reported for the following independent variables: filing status, BEOG-reported adjusted gross income, eligibility status, and application type.

Accuracy of BEOG-Reported Adjusted Gross Income

The total column of Table 4.1 provides an overview of the accuracy of BEOG-reported AGI entries for the total group of regular (non-supplemental) applicants.[1/] About one-third of the applicants (34.9%) evidenced no discrepancy between the BEOG and IRS AGI entries. Furthermore, an overwhelming majority (70.7% of the

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1/ Tables in this chapter define accurate reporting of income and federal taxes as the IRS value being within ± $50 of the BEOG-reported values. See Tables A.1 and A.2 in Appendix A, for data indicating the proportion of applicants whose IRS income and tax data were exactly equal to their BEOG-reported information.

applicants' BEOG income entries were within $50 of their IRS-reported income figures. Of the applicants who evidenced a discrepancy between BEOG- and IRS-reported income, more underreported their income to the Basic Grant program than overreported it - 21.6 percent of the applicants reported larger AGI figures on the IRS returns than in their BEOG applications, while 19.2 percent reported larger income figures on their BEOG applications. A significant minority of the applicants (8%) underreported their BEOG AGI figures by more than $2,000, while a smaller number (3.2%) overreported their AGI to BEOGS by the same amount. Therefore, while errors in both directions are made on about one-third of the applications, Basic Grant AGI figures are underreported slightly more often than they are overreported, and a sizable minority of Basic Grant applicants underreport their incomes by a large amount (over $2,000).[1/]

The accuracy of dependent vs. independent students' AGI entries is compared in the first three columns of Table 4.1. Almost three quarters (72.2%) of the dependent students had no discrepancy between their BEOG- and IRS-reported income figures, compared to 65.5 percent of the independent students. More than 12 percent of the independent students underreported their BEOG income figures, by over $1000 while this was so for 11.2 percent of the dependent students. Dependent and independent students were also equally likely to underreport their BEOG income figures by large amounts (over $2,000) - about 8 percent for each group. The general trend was that while dependent students were more likely to accurately report their BEOG income figures than independent students, the two groups were equally likely to underreport their BEOG income data by large amounts (over $2,000).

[1/] It should be recalled that discrepancies between BEOG information and IRS data could be, in part, to the fact that some dependent applicants' parents may have filed separate tax returns or were divorced/separated. Consequently, the proportion of "true" discrepant Basic Grant application would have been less than data indicated.

TABLE 4.1: DISCREPANCIES IN BEOG-REPORTED ADJUSTED GROSS INCOME, BY ELIGIBILITY AND DEPENDENCY STATUS

	Discrepancies in Adjusted Gross Income	All Applicants			Eligible Applicants			Ineligible Applicants		
		Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG	>$1001+	3.5	3.7	2.8	4.9	5.3	3.9	1.5	1.8	.9
	$2001-5000	4.5	4.3	4.8	6.0	5.7	6.6	2.4	2.5	1.9
	$1001-2000	3.7	3.2	4.8	4.9	4.1	6.4	2.0	2.0	2.1
	$501-1000	3.3	2.7	4.7	4.2	3.3	6.0	2.1	2.0	2.5
	$1-500	6.6	5.7	8.5	7.5	6.2	10.1	5.2	5.0	5.9
	$0	70.7	72.2	69.5	63.7	66.2	58.1	78.8	79.1	77.9
BEOG>IRS	$1-500	13.3	2.6	3.6	3.2	2.8	4.0	2.2	2.4	2.9
	$501-1000	1.3	1.2	1.7	1.5	1.4	1.7	1.0	0.8	1.6
	$1001-2000	1.4	1.3	1.4	1.6	1.6	1.6	1.0	1.0	1.1
	$2001-5000	1.7	1.8	1.5	2.1	2.3	1.5	1.2	1.2	1.5
	>$5001+	1.5	1.8	.8	1.0	1.3	.2	2.3	2.4	1.8
		100.0 (N=2,090,398)	100.0 (N=1,497,136)	100.0 (N=607,539)	100.0 (N=1,214,271)	100.0 (N=837,464)	100.0 (N=381,358)	100.0 (N=893,817)	100.0 (N=667,600)	100.0 (N=226,269)

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TABLE 4.2: DISCREPANCIES IN BEOG-REPORTED ADJUSTED GROSS INCOME BY BEOG-REPORTED INCOME RANGES - ALL REGULAR APPLICANTS

	Discrepancies in Adjusted Gross Income	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG	>5001	3.5	11.8	2.6	2.2	2.6	3.8	4.2	2.7	2.3	1.5
	2001-5000	4.4	15.5	3.5	3.3	3.6	4.7	4.4	4.3	3.0	2.5
	1001-2000	3.7	11.7	3.7	3.8	3.3	3.2	3.2	2.7	3.0	1.6
	501-1000	3.3	9.0	4.5	3.6	3.4	2.5	2.8	2.3	2.6	1.5
	51-500	6.6	11.4	10.0	7.7	6.5	5.5	5.3	4.9	4.6	5.4
	=50	70.7	30.7	66.2	67.4	69.7	72.1	72.2	77.1	77.5	78.5
BEOG>IRS	51-500	13.3	2.9	5.0	4.6	3.0	2.3	2.1	2.1	2.2	2.5
	501-1000	1.3	0.7	2.5	2.3	1.7	1.2	0.9	1.1	1.0	0.8
	1001-2000	1.3	2.2	0.0	2.2	2.8	1.9	1.4	.7	.8	.9
	2001-5000	1.7	0.0	0.0	2.5	2.4	1.5	1.2	.9	.9	.9
	>5001	1.5	0.0	0.0	0.0	.7	1.8	2.1	1.6	1.8	3.8
		100.0 (N=2,090,358)	100.0 (N=172,447)	100.0 (N=121,203)	100.0 (N=233,514)	100.0 (N=344,910)	100.0 (N=296,414)	100.0 (N=217,847)	100.0 (N=196,364)	100.0 (N=181,470)	100.0 (N=348,895)

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There were also differences in the accuracy of BEOG-reported income data between eligible and ineligible applicants (see the last six columns of Table 4.1). Almost four-fifths of the ineligible applicants (78.8%) reported their BEOG data accurately compared to approximately three-fifths (63.7%) of the eligible applicants. Likewise 13.2 percent of the ineligible applicants, as compared to 27.5 percent of the eligibles, underreported their income to the Basic Grant Program. Furthermore, a larger number of eligibles (10.9% vs. 3.9%) underreported their BEOG income figures by more than $2,000. It is apparent, then, that eligible applicants were far more likely to report a lower AGI figure on their BEOG application than on their IRS return (i.e., to underreport their income to BEOGS).

Table 4.2 examines applicants' AGI discrepancies by levels of their BEOG-reported income. In general, applicants who report high incomes on their BEOG applications were far more likely to report their incomes accurately; applicants with incomes of $10,000 or more had higher than average accuracy rates for AGI figures. Very low income (less than $4,000) applicants had a lower than average rate of accurate AGI reporting. This trend can be summarized as follows: as BEOG-reported income increases, the rate at which AGI figures are accurately reported also increases. Furthermore, almost 70 percent of the applicants with incomes of less than $1,000 underreported their AGI on the Basic Grant application, and almost 12 percent of this low income group underreported by more than $5,000.[1/]

The distributions of AGI discrepancies by BEOG-reported income levels for eligible and ineligible students reveal that eligibles were consistently less accurate than ineligibles (see Tables 4.3 and 4.4). Assuming that the same variables impact the accuracy of income reporting among eligible applicants as ineligible applicants (e.g., time of application submission, parent marital complexities, etc.), the data in Tables 4.3 and 4.4 would indicate, circumstantially, that deliberate misreporting of income data constitutes a

[1/] Again, all findings pertaining to low income applicant groups must be interpreted carefully due to the relatively low IRS/BEOG match rates obtained for these applicants.

TABLE 4.4: DISCREPANCIES IN BEOG-REPORTED ADJUSTED GROSS INCOME BY BEOG-REPORTED INCOME RANGES - ELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income									
	Discrepancies in Adjusted Gross Income	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG	>$001+	1.5	8.4	1.3	.9	.8	1.2	2.1	1.5	2.0	1.4
	2001-5000	2.3	12.8	2.2	2.0	1.7	1.8	2.3	2.6	2.2	2.3
	1001-2000	2.0	8.0	2.2	2.8	1.9	1.8	2.1	1.8	2.7	1.5
	501 1000	2.1	7.9	3.4	2.8	2.5	1.6	2.5	2.1	2.5	1.5
	51 500	5.2	13.5	9.7	6.3	6.0	4.2	4.1	4.8	4.4	5.4
	±50	78.8	44.8	72.8	76.7	78.6	81.2	79.2	80.9	79.6	78.9
	51 500	2.6	3.9	4.6	3.2	3.2	1.8	2.0	2.1	2.2	2.4
BEOG>IRS	501 1000	1.0	0.8	1.8	1.8	1.7	1.1	0.7	0.7	0.9	0.8
	1001-2000	1.0	0.0	2.0	1.4	1.4	1.2	1.1	.7	.7	.9
	2001-5000	1.2	0.0	0.0	1.2	1.8	2.0	1.2	1.2	1.2	1.1
	>5001+	2.2	0.0	0.0	0.0	0.6	1.8	2.5	1.5	1.5	3.8
		100.0 (N=893,817)	100.0 (N=10,301)	100.0 (N=11,907)	100.0 (N=61,804)	100.0 (N=86,166)	100.0 (N=76,865)	100.0 (N=71,306)	100.0 (N=109,388)	100.0 (N=128,183)	100.0 (N=333,095)

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TABLE 4.3: DISCREPANCIES IN BEOG-REPORTED ADJUSTED GROSS INCOME BY BEOG-REPORTED INCOME RANGES - ELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income									
	Discrepancies in Adjusted Gross Income	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG	>5001+	4.9	12.0	2.7	2.7	3.2	4.8	5.4	4.2	3.1	3.3
	2001-5000	6.0	15.6	3.7	3.8	4.3	4.7	5.5	4.4	4.8	5.7
	1001-2000	4.8	11.9	3.8	4.1	3.7	3.8	3.8	3.7	3.5	3.0
	501-1000	4.2	9.1	4.5	3.9	3.8	2.9	2.9	2.7	2.7	2.3
	51-500	7.4	11.2	10.0	8.2	6.8	6.0	6.3	5.4	5.2	5.2
	±50	63.7	36.9	65.5	64.1	66.8	68.8	68.2	72.3	72.7	71.3
	51-500	3.2	2.8	5.1	4.7	3.2	2.6	2.2	2.2	2.1	2.8
BEOG>IRS	501-1000	1.5	0.6	2.6	2.4	1.7	1.2	1.0	1.2	1.1	1.3
	1001-2000	1.6	0.0	2.2	3.3	2.1	1.5	1.1	.8	1.1	1.0
	2001-5000	2.2	0.0	0.0	2.9	2.8	2.3	1.8	1.5	1.6	1.0
	>5001+	1.0	0.0	0.0	0.0	0.8	1.8	1.9	1.8	2.3	3.1
		100.0 (N=1,214,271)	100.0 (N=162,156)	100.0 (N=109,329)	100.0 (N=172,611)	100.0 (N=258,805)	100.0 (N=219,662)	100.0 (N=140,562)	100.0 (N=87,021)	100.0 (N=53,411)	100.0 (N=15,841)

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TABLE 4.5: DISCREPANCIES IN BEOG-REPORTED FEDERAL INCOME TAXES, BY ELIGIBILITY AND DEPENDENCY STATUS

	Discrepancies in Taxes Paid	All Applicants			Eligible Applicants			Ineligible Applicants		
		Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG	>2001+	.75	.93	.26	.72	.9	.33	.77	.96	.19
	1001-2000	2.41	2.97	.93	1.81	2.19	.98	3.14	3.92	.85
	501-1000	4.04	4.86	1.88	4.31	5.46	1.68	3.60	4.08	2.18
	51-500	10.2	11.3	7.1	11.7	13.7	7.0	8.0	8.2	7.3
	±50	62.1	59.7	66.8	58.7	54.8	66.7	65.5	65.1	66.9
BEOG>IRS	51-500	16.4	14.8	20.0	18.3	17.0	21.0	13.7	12.1	18.5
	501-1000	3.55	3.99	2.33	3.66	4.39	1.98	3.31	3.45	2.90
	1001-2000	1.17	1.41	.54	.97	1.28	.28	1.41	1.55	.97
	>2001+	.46	.56	.19	.33	.4	.14	.61	.72	.26
		100.0 (N=2,048,648)	100.0 (N=1,474,692)	100.0 (N=587,853)	100.0 (N=1,176,548)	100.0 (N=816,359)	100.0 (N=363,814)	100.0 (N=889,972)	100.0 (N=665,894)	100.0 (N=224,128)

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relatively small but significant practice among eligible Basic Grant applicants. This interpretation is reinforced when it is observed that eligible applicants were at least 3 times more likely to underreport their BEOG incomes by more than $5000 than were ineligible applicants (4.9% versus 1.5%, respectively).

Applicants were generally less accurate in reporting their federal income taxes than their adjusted gross incomes. Whereas 70.7 of all applicants reported incomes within ± $50 of IRS data, 62.1 percent of the applicants reported their federal taxes within this same margin of error. However, as the data in Table 4.5 indicate, more than 88 percent of all applicants report federal taxes on their BEOG applications which are within ± $500 of the amount actually paid to IRS. Considering that many students submit their Basic Grant applications before filing tax returns, the fact that so many applicants report taxes within ± $500 of their actual tax obligations must be taken as evidence that the vast majority of applicants reported federal taxes as accurately as they were able. This same high level of accurate tax reporting was consistent across eligibility and dependency status (see Table 4.5).

Considering tax accuracy by BEOG-reported income levels, Table 4.6 indicates that the most accurate applicants were low income applicants (those earning less than $4,000 a year). This may reflect the fact that many applicants in these income categories paid no income taxes and reported this information on their BEOG applications. However, previous data in this chapter demonstrated that these low income applicants also had the highest rates of underreporting adjusted gross income to the Basic Grant program. Consequently, their relatively high rate of accuracy with respect to taxes is somewhat paradoxical and cannot entirely be explained on the assumption that they had no federal tax liability. One possible explanation is that while low income applicants often underreported their adjusted gross incomes, they nevertheless accurately reported their federal income taxes. This pattern of income underreporting and accurate tax reporting would be to the applicants' advantage with respect to Basic Grant eligibility.

TABLE 4.5: DISCREPANCIES IN BEOG-REPORTED FEDERAL INCOME TAXES, BY ELIGIBILITY AND DEPENDENCY STATUS

		All Applicants			Eligible Applicants			Ineligible Applicants		
	Discrepancies in Taxes Paid	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG	>2001+	.75	.93	.26	.72	.9	.33	.77	.96	.19
	1001-2000	2.41	2.97	.93	1.81	2.19	.98	3.14	3.92	.85
	501-1000	4.04	4.86	1.88	4.31	5.46	1.68	3.60	4.08	2.18
	51-500	10.2	11.3	7.1	11.7	13.7	7.0	8.0	8.2	7.3
	±50	62.1	59.7	66.8	58.7	54.8	66.7	65.5	65.1	66.9
BEOG>IRS	51-500	16.4	14.8	20.0	18.3	17.0	21.0	13.7	12.1	18.5
	501-1000	3.55	3.99	2.33	3.66	4.39	1.98	3.31	3.45	2.90
	1001-2000	1.17	1.41	.54	.97	1.28	.28	1.41	1.55	.97
	>2001+	.46	.56	.19	.33	.4	.14	.61	.72	.26
		100.0 (N=2,048,648)	100.0 (N=1,474,692)	100.0 (N=587,853)	100.0 (N=1,176,548)	100.0 (N=816,359)	100.0 (N=363,814)	100.0 (N=889,972)	100.0 (N=665,894)	100.0 (N=224,128)

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TABLE 4.6: DISCREPANCIES IN BEOG-REPORTED FEDERAL INCOME TAXES BY BEOG-REPORTED INCOME RANGES - ALL REGULAR APPLICANTS

		BEOG Reported Adjusted Gross Income								
Discrepancies in Taxes Paid	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >2001+	.7	1.3	.3	.4	.4	.8	.8	.5	.8	1.2
IRS>BEOG 1001-2000	2.4	2.3	.7	.6	.9	1.7	3.1	4.2	3.7	4.0
IRS>BEOG 501-1000	4.0	2.9	.9	1.1	2.9	8.3	2.6	4.5	3.5	2.5
IRS>BEOG 1-500	10.2	9.6	6.0	10.5	16.0	11.6	9.9	8.5	7.4	6.8
0	62.1	70.2	69.2	65.8	54.8	53.0	55.1	61.2	63.0	66.1
BEOG>IRS 1-500	16.4	6.6	22.7	20.4	21.2	23.5	15.6	13.5	13.8	12.4
BEOG>IRS 501-1000	3.6	6.4	.1	1.0	3.4	5.2	5.6	5.0	5.1	3.5
BEOG>IRS 1001-2000	1.2	0.0	0.0	.1	.3	1.0	1.8	2.0	2.4	2.0
BEOG>IRS >2001+	.3	1.1	1.1	2.9	.2	.2	.5	.3	.3	1.6
	100.0 (N=2,048,648)	100.0 (N=157,076)	100.0 (N=115,006)	100.0 (N=223,706)	100.0 (N=337,079)	100.0 (N=293,735)	100.0 (N=217,558)	100.0 (N=196,194)	100.0 (N=181,420)	100.0 (N=348,792)

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The least accurate reporters of federal taxes were applicants in the intermediate income ra... ($,000-$12,...0 p annum). However, these applicants were almost as likely to overreport taxes as they are to underreport them, and few applicants evidenced extreme discrepancies. High income applicants were more likely to report taxes accurately relative to middle income applicants, but 8.8 percent of the applicants earning in excess of $17,500 evidenced discrepancies in excess of ± $1,000. The relatively higher proportion of high income applicants exhibiting substantial tax discrepancies also is understandable in that individuals in this group who submitted applications prior to the submission of tax returns were likely to have only crude estimates of their particular tax liabilities.

Tables 4.7 and 4.8 indicate that despite overall data showing that tax misreporting was equally likely to be in the direction of under or overreporting, eligible applicants were more likely to overreport taxes on their BEOG applications than ineligible applicants. This is particularly so in the higher income ranges. For example, of those earning $15,000 to $17,499 a year, 11.1 percent of all eligible applicants overreported taxes on their application by more than $500 and 8.1 percent underreported taxes. Among ineligible applicants in the same income group, the comparable proportions were 5.9 percent and 8 percent, respectively. Among eligible applicants earning in excess of $17,500 a year, 13.1 percent overreported taxes by more than $500 and 6.7 underreported. For ineligible applicants in this income group, the comparable proportions were 6.8 percent and 7.9 percent, respectively.

Given that the higher the taxes reported on Basic Grant applications the more one is likely to increase his/her eligibility for a Basic Grant award, the fact that high income eligibles were more likely to substantially overreport their federal taxes than any other income group raises questions concerning possible program abuse. However, many applicants who submitted Basic Grant applications prior to the submission of their tax returns probably reported federal withholding taxes as an estimate of their

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TABLE 4.7: DISCREPANCIES IN BEOG-REPORTED FEDERAL INCOME TAXES BY BEOG-REPORTED INCOME RANGES - ELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Taxes Paid	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >2001+	.8	1.3	.3	.4	.7	.7	.9	.7	.8	.7
IRS>BEOG 1001-2000	1.8	2.3	.7	.8	1.0	2.0	3.0	3.3	3.0	3.0
IRS>BEOG 501-1000	4.3	2.9	.9	1.1	2.9	8.4	7.7	4.8	4.3	3.0
IRS>BEOG 51-500	11.7	9.6	6.2	10.7	17.1	12.4	10.5	19.9	8.6	8.5
=50	58.7	77.2	68.1	63.8	52.4	50.1	51.7	56.4	56.4	56.1
BEOG>IRS 51-500	18.3	6.5	23.4	21.7	21.6	16.3	17.3	16.1	15.5	15.4
BEOG>IRS 501-1000	3.6	0.0	.1	1.1	3.9	5.8	6.4	5.8	6.6	6.2
BEOG>IRS 1001-2000	1.0	0.0	0.0	.1	.5	1.1	1.9	2.8	3.5	4.0
BEOG>IRS >2001+	.2	0.0	0.0	0.0	.2	.2	.6	.5	1.0	2.9
	100.0 (N=1,176,548)	100.0 (N=147,946)	100.0 (N=103,650)	100.0 (N=163,818)	100.0 (N=251,674)	100.0 (N=217,226)	100.0 (N=140,279)	100.0 (N=86,911)	100.0 (N=43,406)	100.0 (N=15,844)

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TABLE 4.8: DISCREPANCIES IN BEOG-REPORTED FEDERAL INCOME TAXES BY BEOG-REPORTED INCOME RANGES - INELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Taxes Paid	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,499 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >$2001	.7	.4	.2	.1	.2	.3	.5	.5	.9	1.3
IRS>BEOG $1001-2000	3.2	1.9	.5	.5	.4	1.2	3.2	4.9	4.0	4.1
IRS>BEOG $501-1000	3.6	1.9	.6	1.0	3.1	7.9	7.5	4.2	3.1	2.5
IRS>BEOG $1-500	8.0	8.8	4.2	9.6	12.6	9.0	8.9	7.8	6.8	6.6
$0	65.5	82.4	78.6	71.1	61.5	61.1	61.3	65.2	65.7	66.6
BEOG>IRS $1-500	13.7	4.6	15.8	17.0	20.2	16.2	12.5	11.6	13.3	12.3
BEOG>IRS $501-1000	3.3	0.0	0.0	.7	1.8	3.4	4.3	4.3	4.3	3.4
BEOG>IRS $1001-2000	1.4	0.0	0.0	..1	.2	.9	1.6	1.5	1.9	1.9
BEOG>IRS >$2001	.6	0.0	0.0	0.0	.2	0.0	.3	.1	.1	1.5
	100.0 (N=889,972)	100.0 (N=9,139)	100.0 (N=11,389)	100.0 (N=59,987)	100.0 (N=85,466)	100.0 (N=76,626)	100.0 (N=77,300)	100.0 (N=109,328)	100.0 (N=128,118)	100.0 (N=332,990)

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actual tax liability. For higher income applicants, federal withholding taxes are likely to be overestimates of tax liabilities rather than underestimates. Consequently, whether the rate of tax misreporting among higher income applicants was intentional or not cannot be clearly ascertained.

Accuracy of BEOG-Reported Household Size

To assess the accuracy of the BEOG-reported household size figure, BEOG-reported household sizes were compared to the number of exemptions claimed by respondents on their IRS returns. The tax exemption figure should be consistent with household size for most applicants.[1/] The first column of Table 4.9 summarizes these comparisons for the total group of applicants. Based on this criterion, almost one-third (30.5%) of the applicants did not correctly report their household size on their BEOG application. Most of the applicants who evidenced a discrepancy between the two figures reported a larger household size figure than the number of exemptions claimed (26.8% of the total number of applicants) - that is, about one quarter of the applicants overreported household size on their BEOG application. The discrepancies that were found between household size and exemptions were generally small, however--90 percent of the applicants' household size figures were within a range of plus or minus one person of the IRS-reported number of exemptions.

Table 4.9 also permits an examination of the accuracy of BEOG-reported household size by dependency and eligibility status. Independent students accurately reported their household size at a higher rate than did dependent students (81.0% vs. 64.7%). This no doubt reflects the fact that many, if not most, independent students

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1/ It should be noted that household size reported on the Basic Grant application should reflect circumstances at the time of application submission, not circumstances during the preceding tax year. Consequently, there may be some legitimate discrepancies between BEOG-reported household sizes and reported tax exemptions. Also note that exemptions considered in this section are not of those for special conditions such as "age 65," "blind," etc.

TABLE 4.9: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE, BY ELIGIBILITY AND DEPENDENCY STATUS

		All Applicants			Eligible Applicants			Ineligible Applicants		
	Discrepancies in Household Size	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG	>4	.34	.41	.15	.46	.56	.21	.16	.20	.04
	3	.18	.13	.31	.19	.14	.29	.17	.11	.35
	2	.54	.45	.77	.72	.62	.94	.29	.23	.47
	1	3.31	2.61	4.97	3.58	2.95	4.90	2.87	2.15	5.10
	0	69.48	64.76	80.99	63.10	56.56	76.53	77.86	74.26	89.02
BEOG>IRS	1	17.11	20.87	7.41	18.96	23.16	9.70	14.24	17.77	5.28
	2	5.43	6.39	2.92	7.11	8.58	3.88	3.00	3.58	1.18
	3	2.19	2.57	1.18	3.11	3.76	1.68	.87	1.06	.29
	>4	2.07	2.36	1.38	3.15	.37	1.91	.56	.65	.27
		100.0 (N=2,079,540)	100.0 (N=1,491,836)	100.0 (N=601,264)	100.0 (N=1,215,838)	100.0 (N=833,785)	100.0 (N=386,444)	100.0 (N=880,717)	100.0 (N=665,865)	100.0 (N=214,902)

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have household sizes of one and therefore independent students are not as likely to encounter situations that may result in some discrepancy between tax exemptions and reported household sizes. A significant number of dependent students (20.9%) reported a household size figure that exceeded their IRS-reported number of exemptions by one, compared to 7.4 percent of the independent students. The overall trend is that independent students reported household size more accurately but more dependent students overreported this figure by one person. This trend holds across students' eligibility status as well.

There are also differences in the accuracy with which eligible and ineligible students reported their household size figures on the Basic Grant application. Eligible applicants were less likely to report the same figures for household size and IRS tax exemptions (63.1% vs. 77.9%). Eligible students' most common discrepancy was that BEOG-reported household size tended to exceed IRS-reported number of exemptions by one person (10.0%).

As Table 4.10 indicates, there is no consistent relationship between applicants' BEOG-reported income level and the accuracy with which they report household size. Furthermore, although there are overall differences in the accuracy of eligible and ineligible applicants' reporting of household size, no clear pattern of relationships between accuracy and income level emerges when eligible and ineligible students are examined separately (see Tables 4.11 and 4.12).

In summary, then, two-thirds of the total number of applicants reported their household size accurately on their BEOG application, using IRS-reported number of exemptions as the criterion for accuracy. The most common discrepancy found was that of reporting a household size figure that exceeded the IRS exemptions figure by one. More people overreported household size than underreported it (26.8% vs. 4.3%). Independent students reported household size more accurately than dependent students. There was no consistent relationship between

TABLE 4.10: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE, BY BEOG-REPORTED INCOME RANGES - ALL REGULAR APPLICANTS

		BEOG Reported Adjusted Gross Income								
Discrepancies in Household Size	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >4	.1	.5	.2	0.0	.1	0.0	.1	.1	0.0	.3
3	.2	.8	.1	.2	.4	.2	.2	.2	.2	.1
2	.3	1.8	.6	.3	.5	.3	.3	.3	.3	.2
1	2.9	5.4	3.3	3.2	4.7	3.3	3.3	2.8	2.7	2.1
0	77.9	77.4	88.0	9.10	85.5	80.7	77.7	77.5	74.3	74.5
BEOG>IRS 1	19.2	7.3	5.2	5.6	6.2	12.1	14.0	15.7	18.0	17.1
2	3.0	3.8	1.5	1.1	1.6	2.4	2.9	2.6	3.1	4.0
3	.9	1.7	.5	.2	.7	.6	1.2	.7	.9	1.0
>4	.5	1.5	.5	.3	.4	.5	.3	.3	.6	.7
	100.0 (N=880,717)	100.0 (N=12,609)	100.0 (N=10,449)	100.0 (N=54,857)	100.0 (N=81,895)	100.0 (N=75,385)	100.0 (N=70,280)	100.0 (N=109,236)	100.0 (N=128,432)	100.0 (N=331,883)

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TABLE 4.11: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE BY BEOG-REPORTED INCOME RANGES - ELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Household Size	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >4	.5	.4	.2	.2	.2	.5	.6	.6	1.5	3.2
3	.2	.4	.2	.1	.2	.1	.2	.1	0.0	0.0
2	.7	1.3	.6	.6	.7	.7	.7	.3	.3	.2
1	3.6	4.5	4.0	3.5	3.8	3.7	2.9	2.4	2.2	1.6
0	63.1	64.3	74.6	62.7	58.7	61.6	63.4	64.3	60.4	56.2
BEOG>IRS 1	19.0	13.8	11.1	18.3	20.9	21.0	21.4	21.8	23.4	23.1
2	7.1	6.8	4.8	7.7	8.2	7.4	6.4	6.1	7.1	4.0
3	3.1	3.6	2.2	3.4	3.9	2.8	2.5	2.1	2.5	3.4
>4	3.1	4.8	2.4	3.6	3.4	2.4	2.1	2.2	2.5	3.2
	100.0 (N=1,205,838)	100.0 (N=202,416)	100.0 (N=97,001)	100.0 (154,582)	100.0 (N=251,582)	100.0 (N=217,115)	100.0 (N=139,743)	100.0 (N=86,601)	100.0 (N=153,250)	100.0 (N=15,877)

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TABLE 4.12: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE BY BEOG-REPORTED INCOME RANGES - INELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Household Size	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG >4+	.4	.4	.2	.2	.1	.3	.3	.3	.4	.5
IRS>BEOG 3	.2	.4	.2	.2	.2	.1	.1	.1	.1	.1
IRS>BEOG 2	.5	1.3	.6	.5	.6	.6	.5	.3	.3	.2
IRS>BEOG 1	3.3	4.6	3.9	3.4	4.0	3.6	3.0	2.6	2.6	2.1
0	69.5	65.1	75.9	70.0	65.3	66.5	68.4	71.7	70.2	75.6
BEOG>IRS 1	17.1	13.5	10.5	14.5	17.3	18.7	18.8	18.4	19.6	17.4
BEOG>IRS 2	5.4	6.6	4.5	6.0	6.6	6.1	5.1	4.1	4.2	4.2
BEOG>IRS 3	2.2	3.5	2.0	2.6	3.1	2.2	2.0	1.4	1.4	1.1
BEOG>IRS 4+	2.1	4.6	2.2	2.7	2.7	2.0	1.5	1.2	1.2	.8
	100.0 (N=2,079,540)	100.0 (N=215,071)	100.0 (N=107,423)	100.0 (N=212,345)	100.0 (N=333,004)	100.0 (N=292,383)	100.0 (N=216,001)	100.0 (N=195,792)	100.0 (N=181,578)	100.0 (N=347,719)

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applicants' income levels and accuracy of reporting household size data, nor did such a relationship emerge when eligible and ineligible students were studied separately.

However, because of the previously mentioned possibility of potentially legitimate inconsistencies between household size and tax exemptions for some applicants, the accuracy of applicants' BEOG-reported tax exemptions was also assessed. A higher rate of accurate BEOG-reported tax exemptions would support the argument that some of the discrepancies between household size and IRS-reported tax exemptions were not due to misreporting.

Accuracy of BEOG-Reported Tax Exemptions

While BEOG-reported household size was consistent with IRS-reported tax exemptions for 69.5 percent of the applicants, the number of tax exemptions reported to the two sources was consistent for almost all applicants (87.8%). Furthermore, the BEOG-reported tax exemptions figure was accurate within plus or minus one of the IRS figure for 95.7 percent of the applicants (see first column of Table 4.13). Very few of the applicants, then, misreported their tax exemptions figure on their Basic Grant applications.

As Table 4.13 also indicates, while the accuracy rates for BEOG-reported tax exemptions did not vary by dependency status, accuracy did vary by eligibility status. Ineligible applicants made more accurate reports of tax exemptions than eligibles (93.9% and 83.5%, respectively, were completely accurate). Similarly, eligibles more often misreported their tax exemptions figure to the BEOG program by plus or minus one than ineligibles (10.2% vs. 2.2%). That is, while eligibles were less accurate, the major source of their inaccuracy was an error of one exemption.

As shown in Table 4.14, very low income applicants (less than $1,000) had lower than average accuracy rates for BEOG-reported tax exemptions (73.2% had no discrepancy between BEOG- and IRS-reported figures, compared to an overall average of 87.9%). At the other end of the income scale, applicants with incomes of $12,500 or more had

TABLE 4.13: DISCREPANCIES IN BEOG-REPORTED PERSONAL TAX EXEMPTIONS BY ELIGIBILITY AND DEPENDENCY STATUS

Discrepancies in Personal Tax Exemptions	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG >4+	.19	.16	.16	.27	.3	.22	.02	.01	.04
3	.24	.25	.22	.35	.39	.27	.09	.08	.14
2	1.17	1.37	.63	1.54	1.88	.77	.64	.73	.39
1	3.54	3.61	2.61	4.38	4.97	3.05	1.87	1.88	1.85
0	87.85	87.17	89.50	83.48	81.94	85.91	93.88	93.32	95.55
BEOG>IRS 1	.98	1.09	.67	5.85	5.79	5.91	.29	.36	.17
2	.67	.67	.67	2.03	2.06	1.93	.19	.20	.18
3	1.40	1.43	1.29	1.02	1.04	.96	.52	.63	.21
>4+	4.46	4.49	4.28	1.46	1.67	1.00	2.49	2.81	1.53
	100.0 (N=156,291)	100.0 (N=114,389)	100.0 (N=41,965)	100.0 (N=1,208,738)	100.0 (N=831,978)	100.0 (N=381,185)	100.0 (N=893,629)	100.0 (N=667,416)	100.0 (N=226,265)

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TABLE 4.14: DISCREPANCIES IN BEOG-REPORTED PERSONAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - ALL REGULAR APPLICANTS

		BEOG Reported Gross Income									
	Discrepancies in Personal Tax Exemptions	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG	>4*	.1	.6	.1	.1	.1	.3	0.0	0.0	0.0	0.0
	3	.2	.6	.3	.3	.3	.2	.3	.1	0.0	.1
	2	1.2	1.6	.9	1.0	1.3	1.6	1.5	1.2	.9	.5
	1	3.3	4.4	2.9	3.9	4.8	4.1	3.2	2.0	1.9	1.9
	0	87.9	73.2	87.3	85.3	84.4	86.9	89.1	92.6	93.3	94.2
BEOG>IRS	1	4.5	9.5	4.8	5.8	5.7	4.5	3.8	2.6	2.5	2.0
	2	1.4	4.1	1.8	1.8	1.6	1.2	.9	.7	.7	.6
	3	.7	2.3	.8	.8	.8	.6	.6	.3	.2	.2
	>4*	.9	3.7	1.1	.9	.9	.7	.6	.5	.5	.5
		100.0 (N=2,084,606)	100.0 (N=171,176)	100.0 (N=120,667)	100.0 (N=231,928)	100.0 (N=343,606)	100.0 (N=295,741)	100.0 (N=217,602)	100.0 (N=196,259)	100.0 (N=181,371)	100.0 (N=348,807)

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higher than average accuracy rates for tax exemptions (between 92.6% and 94.2%). This same trend holds for eligible applicants, but not for ineligibles (see Tables 4.15-4.16). While very low income ineligibles had lower tax exemption accuracy rates than other ineligibles (85.2% compared to the subgroup average of 93.9%), the accuracy rates did not vary appreciably between the other income categories. That is, high income ineligibles were not more accurate in their reports of tax exemptions than middle income ineligibles.

In summary, then, applicants tend to report the same number of tax exemptions on their BEOG applications as they claim on their IRS returns. The errors that did occur tended to be discrepancies of plus or minus one exemption between the two sources. Ineligible applicants report their tax exemptions to the BEOG program more accurately than eligibles. Low income (less than $1,000) applicants were less accurate than the other income groups; and, within the group of eligible applicants only, higher income applicants were more accurate than the overall average for eligibles. The lower proportion of discrepancies between BEOG- and IRS-reported tax exemptions than between BEOG-reported household size and IRS-reported tax exemptions supports the argument that some of the latter discrepancies were not the result of misreporting.

Eligibility Indices Calculated With IRS-Reported Data

The item-by-item comparisons between IRS- and BEOG-reported figures that are entered into the SEI determination has indicated that some students misreport their adjusted gross incomes and Federal taxes on their BEOG applications. To determine the extent to which this misreporting affects the students' eligibility for a Basic Grant, the students' eligibility indices were re-calculated, substituting IRS-reported AGI and federal tax data for the BEOG-reported figures. A comparison of SEIs based on the IRS- and BEOG-reported figures would indicate the overall impact of misreporting of these two key entries on the students' award eligibility. The following tables examine the discrepancy between the IRS- and BEOG-based SEIs. Since, for each student, the discrepancy score was

TABLE 4.15: DISCREPANCIES IN BEOG-REPORTED PERSONAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - ELIGIBLE REGULAR APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Personal Tax Exemptions	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
IRS>BEOG +4+	.4	.6	.1	.3	.3	.3	.1	.2	.2	.2
IRS>BEOG 3	.4	.6	.3	.4	.3	.3	.5	.1	.1	.1
IRS>BEOG 2	1.5	1.6	.9	1.3	1.5	1.9	1.8	1.5	1.4	1.8
IRS>BEOG 1	4.4	4.4	3.1	4.9	5.8	4.6	3.7	2.6	2.4	2.5
0	83.5	72.4	86.5	81.5	81.3	85.1	87.6	90.2	90.5	90.2
BEOG>IRS 1	5.8	9.8	5.0	7.0	6.5	4.7	3.9	3.2	3.1	3.2
BEOG>IRS 2	2.0	4.3	2.0	2.4	2.1	1.5	1.0	.9	.8	.6
BEOG>IRS 3	1.0	2.4	.9	1.0	1.0	.7	.6	.4	.4	.4
BEOG>IRS +4+	1.4	3.9	1.1	1.3	1.2	1.1	.8	.4	1.1	1.1
	100.0 (N=1,208,738)	100.0 (N=160,886)	100.0 (N=108,796)	100.0 (N=171,035)	100.0 (N=257,501)	100.0 (219,048)	100.0 (N=140,317)	100.0 (N=86,916)	100.0 (N=53,357)	100.0 (N=15,837)

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TABLE 4.16: DISCREPANCIES IN BEOG-REPORTED PERSONAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - INELIGIBLE REGULAR APPLICANTS ONLY

Discrepancies in Personal Tax Exemptions	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG 4+	0.0	.2	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	.1	.9	.1	.2	.1	0.0	.1	0.0	0.0	0.1
2	.6	1.9	.5	.2	.5	.8	.9	1.0	.7	.5
1	1.9	5.9	1.5	1.2	1.9	2.5	2.5	1.6	1.7	1.9
0	93.9	85.2	94.9	95.8	93.6	91.9	91.8	94.4	94.5	94.5
BEOG>IRS 1	2.5	4.8	2.5	2.2	3.3	3.9	3.5	2.1	2.2	1.9
2	.5	1.2	.4	.3	.3	.5	.5	.5	.4	.4
3	.2	.5	.3	0.0	.2	.2	.5	.2	.1	.2
4+	.2	1.3	.1	.1	0.0	.1	.3	.2	.2	.5
	100.0 (N=893,629)	100.0 (N=18,299)	100.0 (N=11,904)	100.0 (N=60,994)	100.0 (N=86,166)	100.0 (N=76,760)	100.0 (N=77,306)	100.0 (N=109,388)	100.0 (N=128,118)	100.0 (N=333,872)

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computed by subtracting the BEOG SEI from the SEI based on IRS-reported data, the positive discrepancy figures indicate that the IRS-based figures exceeded the SEIs on which students' awards were based. A positive discrepancy figure, than, means that a student's eligibility index based on accurate data would have been higher than his/her BEOG-calculated SEI.

As the first column of Table 4.17 indicates, overall, almost 70 percent of the applicants' IRS-based SEIs were within ± 50 points of their BEOG SEIs of record. In addition, another 10 percent of the applicants' IRS-based SEIs were within plus or minus 200 points of BEOG SEIs, indicating that the misreporting that occurred had a fairly small impact on the SEIs. Of the students whose IRS- and BEOG-based SEIs were discrepant by more than 200 points, the IRS-based SEIs were more often larger than the BEOG SEIs. Overall, 12.3 percent of the applicants exhibited IRS-based SEIs which were more than 200 points higher than their BEOG SEIs, whereas 1.7 percent exhibit the reverse situation.

As Table 4.17 further indicates, though, eligible applicants, particularly independent eligible applicants were more likely to exhibit IRS-based SEIs that were more than 200 points larger than their BEOG SEIs. Fourteen percent of all eligible applicants exhibited IRS-based SEIs which were more than 200 points higher than their BEOG SEIs (12.2% eligible dependents; 18.7% eligible independents) whereas this was so for 9.8 of the ineligible applicants (8.3% ineligible dependents; 14.1% ineligible independents).

The comparability of IRS-based and BEOG SEIs is presented in Tables 4.18, 4.19, and 4.20. Table 4.18 considers income ranges for all regular applicants whereas Tables 4.19 and 4.20 examine income ranges of eligible and ineligible regular applicants, respectively. These tables indicate that, in general, middle and high income applicants (those in the $7000 to $17,499 income groups) more often evidenced discrepant IRS/BEOG SEIs than low income

TABLE 4.17: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA BY ELIGIBILITY AND DEPENDENCY STATUS[1/]

		All Applicants			Eligible Applicants			Ineligible Applicants		
	Eligibility Index Discrepancies	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG	>801	4.9	3.8	7.5	6.2	4.7	9.3	3.1	2.6	4.6
	501-800	2.2	1.9	2.7	2.5	2.0	3.1	1.7	1.6	1.9
	201-500	5.2	4.6	6.8	5.3	4.9	6.3	5.0	4.1	7.6
	51-200	8.6	8.2	9.5	8.7	8.6	8.8	8.4	7.6	10.8
	±50	69.7	70.7	65.7	70.1	70.9	67.7	67.8	69.6	62.5
BEOG>IRS	51-200	2.3	5.9	2.9	4.7	5.8	2.2	5.5	5.9	1.1
	201-500	2.7	3.1	2.2	1.8	1.9	1.4	1.1	1.1	1.03
	501-800	2.7	.82	.85	.67	.61	.74	4.1	4.5	3.5
	>801	1.7	1.0	1.9	.42	.36	.54	3.3	3.1	4.2
		100.0 (N=2,050,358)	100.0 (N=1,497,136)	100.0 (N=607,539)	100.0 (N=1,214,291)	100.0 (N=837,464)	100.0 (N=581,358)	100.0 (N=893,817)	100.0 (N=667,600)	100.0 (N=226,269)

[1/]Substitution involved adjusted gross income and federal tax data only.

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TABLE 4.18: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME RANGES[1]/

		BEOG Reported Adjusted Gross Income									
	Eligibility Index Discrepancies	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG	+801	4.9	17.7	5.8	3.9	3.2	4.4	5.2	3.7	3.1	2.4
	501-800	2.2	4.9	2.5	1.6	1.8	2.0	2.5	2.0	2.2	1.5
	201-500	5.3	7.3	4.7	4.9	4.9	5.4	5.9	5.3	5.8	3.7
	51-200	8.6	5.7	11.1	6.8	7.7	10.3	10.3	9.2	9.6	7.4
	±50	69.7	61.7	71.6	77.4	73.4	64.4	62.2	67.5	62.5	71.4
BEOG>IRS	51-200	2.3	1.4	2.1	2.7	3.0	8.7	8.5	6.0	5.0	4.0
	201-500	2.8	.6	1.5	1.3	2.8	2.7	3.2	4.0	3.7	4.2
	501-800	.9	.2	.4	.6	.7	.9	.7	.9	1.0	1.4
	+801	1.7	.5	.2	.9	1.0	1.4	1.7	1.6	1.9	4.0
		100.0 (2,090,358)	100.0 (N=172,447)	100.0 (N=121,203)	100.0 (N=233,514)	100.0 (N=344,910)	100.0 (N=296,414)	100.0 (N=217,847)	100.0 (N=197,364)	100.0 (181,470)	100.0 (N=348,895)

[1]/ Substitution involved adjusted gross income and federal tax data only.

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TABLE 4.19: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA BY BEOG-REPORTED INCOME RANGES[1/]

Eligibility Index Discrepancies	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG >801	6.2	17.3	5.9	3.6	3.1	4.8	6.0	4.9	3.9	4.4
501-800	2.6	4.8	2.5	1.5	1.6	2.3	3.0	2.6	2.6	2.8
201-500	5.3	7.0	4.7	4.1	4.0	5.7	6.0	6.1	6.6	6.3
51-200	8.7	5.4	10.8	5.2	6.7	10.8	11.9	11.1	11.5	11.8
±50	70.1	63.1	72.2	81.9	77.8	64.7	60.7	64.6	64.4	65.6
BEOG>IRS 51-200	4.7	1.3	2.1	1.7	4.0	8.3	8.3	6.6	6.1	4.7
201-500	1.8	.6	1.4	1.0	1.8	2.4	2.7	2.5	2.7	1.9
501-800	.7	.2	.4	.5	.6	.9	.9	1.2	1.3	1.0
>801	.4	.2	.1	.4	.3	.5	.5	.7	1.0	1.5
	100.0 (N=1,214,271)	100.0 (N=162,156)	100.0 (N=109,329)	100.0 (N=172,611)	100.0 (N=258,805)	100.0 (N=219,666)	100.0 (N=140,562)	100.0 (N=87,021)	100.0 (N=53,411)	100.0 (N=15,841)

[1/] Substitution involved adjusted gross income and federal tax data only.

4.29

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TABLE 4.20: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA BY BEOG-REPORTED INCOME RANGES[1/]

		BEOG Reported Adjusted Gross Income								
Eligibility Index Discrepancies	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG >$801	3.1	23.9	5.1	4.8	3.4	3.1	3.6	2.7	2.7	2.3
IRS>BEOG $501-800	1.7	6.7	2.3	1.8	2.1	1.2	1.3	1.5	2.1	1.5
IRS>BEOG $201-500	5.0	10.4	5.1	6.9	7.5	5.1	5.6	4.7	5.5	3.6
IRS>BEOG $1-200	8.4	9.7	13.0	11.3	11.0	8.6	7.7	7.7	8.7	7.2
±$0	67.8	39.7	65.7	64.5	60.1	63.4	64.9	69.7	69.2	71.6
BEOG>IRS $1-200	5.5	2.6	3.4	5.6	6.2	9.7	8.6	5.5	4.6	3.9
BEOG>IRS $201-500	4.2	1.7	2.6	1.9	5.5	3.6	4.0	5.3	4.1	4.4
BEOG>IRS $501-800	1.0	.3	1.0	.9	1.1	1.0	.6	.9	.9	1.4
BEOG>IRS >$801	3.3	5.1	1.6	2.1	3.1	4.1	3.7	2.3	2.2	4.1
	100.0 (N=983,817)	100.0 (N=10,301)	100.0 (N=11,907)	100.0 (N=61,004)	100.0 (N=86,166)	100.0 (N=76,865)	100.0 (N=77,306)	100.0 (N=109,388)	100.0 (N=128,163)	100.0 (N=333,095)

[1/] Substitution involved adjusted gross income and federal tax data only.

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applicants or those reporting incomes in excess of $17,500. However, extremely low income applicants (those reporting less than $1000 a year) exhibited a significant proportion of applicants whose IRS-based SEI was more than 200 points higher than their BEOG-SEI of record (29.9%) including 17.7 percent whose IRS-based SEIs exceeded BEOG SEIs by more than 800 points.

In terms of eligibility status by income level, a mixed picture emerged. In general, eligible applicants more often exhibited comparable IRS/BEOG SEIs than ineligible applicants in the low income ranges. In the higher income ranges, ineligibles had a slightly higher proportion of comparable IRS/BEOG SEIs (± 50 points). However, irrespective of income group eligibles were much more likely to exhibit IRS-based SEIs which were 200 points greater than their BEOG SEIs rather than 200 points lower. In fact, among high income groups, ineligible applicants were almost as likely to have IRS SEIs 200 points greater than their BEOG SEIs as they were to have IRS SEIs that were 200 points lower than their BEOG SEIs. Among eligibles in these same groups, applicants were 2 to 4 times more likely to have IRS SEIs which exceeded their BEOG SEIs by 200 or more points than BEOG SEIs which exceeded IRS SEIs by the same magnitude.

In summary, the data in this section indicates that for the 1976-77 application year, SEIs based on IRS data were reasonably comparable to BEOG SEIs of record. From the perspective of quality assurance, though, there appeared to be sufficient discrepancy among IRS-based SEIs and BEOG SEIs of record to justify the conclusion that millions of dollars for 1976-77 Basic Grant awards were disbursed inappropriately.

Accuracy of BEOG-Reported Data for Supplemental Applicants

The previous section has analyzed the discrepancies between major BEOG-reported application entries and similar figures reported to the IRS for all regular applicants, and has examined the impact

of these discrepancies on students' eligibility indices. This section will briefly address the issue of accuracy of supplemental applicants' BEOG-reported figures and the effect of discrepancies in income and taxes paid figures on their eligibility indices. For the interested reader, tables for this section are presented in Appendix B.

Discrepancies between IRS- and BEOG-reported figures have a different meaning for regular and supplemental applicants. For the items under consideration (except household size), regular applicants' BEOG-reported figures are supposed to be equal to the figures reported on their federal income tax returns. In fact, application instructions refer the applicant to the precise line on his/her tax return from which to obtain the entry for his/her BEOG application. Discrepancies between the pair of figures, then, would almost always indicate misreporting for regular applicants, whether of an intentional or unintentional nature. Supplemental applicants, though, are instructed to estimate the relevant figures for the current application year. Discrepancies between their BEOG estimates and current-year IRS figures, then, indicate that the estimates were inaccurate, but these inaccuracies are not necessarily indicators of misreporting. The findings in this section reveal how closely BEOG supplemental applicants were able to estimate their actual financial situation, which was unknown to them at the time of the estimate.

Table B.1 presents discrepancies between IRS- and BEOG-reported adjusted gross income figures. As the first column indicates, very few applicants estimated their income with complete accuracy (3.2%). However, 35.7 percent were within ± $1000 of their actual earned income and over half (55.4%) of the applicants' income figures were within ± $2,000 of their actual earned income (as reported to the IRS). A overwhelming proportion of the supplemental applicants (75.7%) underestimated their income on their BEOG application, while only one-fifth (21.2%) overestimated their income figures. It is

apparent, then that a substantial number of supplemental applicants tend to underestimate their IRS figures by more than $2,000 (35%).

Table B.1 also indicates the independent students made slightly more accurate estimates of AGI than dependent students, and ineligibles' estimates were slightly more accurate than those of eligibles.

Supplemental applicants were associated with more accurate estimates[1/] of their federal income taxes than their AGIs (see Table B.5). One-quarter (25.5%) of the supplemental applicants had no discrepancy between their BEOG-estimated taxes and the taxes reported on their federal tax return (IRS data exactly equal to BEOG data). Furthermore, most of the estimates (81.1%) were within ± 500 of the actual figure. Over twice as many supplemental applicants underestimated their taxes as opposed to overestimating them (53.6% and 20.9%, respectively).

As also shown by Table B.5, independent students were associated with more accurate tax estimates than dependent students. Eligible applicants were associated with more accurate tax estimates than ineligible applicants.

One would expect that a supplemental applicant could estimate his/her household size and/or number of tax exemptions more accurately than his/her income, since the former figures are less likely to change over the course of the year. As Tables B.9 and B.13 indicate, supplemental applicants made fairly accurate estimates of household size and number of tax exemptions (80.7% and 77.1%, respectively, had no discrepancy between their IRS and BEOG figures). Of the applicants whose estimates were inaccurate, more applicants overestimated these figures than underestimated them (14.8% and

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[1/] In the case of supplemental applications, estimated federal income taxes are computed by the BEOG application processor based on income and other data provided by supplemental applicants. This important BEOG data element is not estimated directly by the applicant.

4.6%, respectively, for household size estimates; and 14.9% and 8.1%, respectively, for tax exemptions estimates).

For both sets of figures, independent students made more accurate estimates than dependent students, and ineligibles' estimates were more accurate than eligibles' estimates.

Table B.17 compares supplemental applicants' original BEOG-calculated SEIs with SEIs determined by substituting IRS-reported AGI and taxes paid figures into the SEI algorithm. A positive discrepancy between the two SEIs indicates that the IRS-determined SEI exceed the BEOG-calculated figure, and that the SEI based on estimated data was more favorable to the student (i.e., lower) than the SEI based on the actual financial figures.

Few supplemental applicants evidenced comparable IRS-based and BEOG SEIs. This was, of course, anticipated because of the estimated data used to generate adjusted gross income and federal tax information on supplemental applications. What was not anticipated was the relatively large proportion of supplemental applicants whose IRS-based SEI exceeded their BEOG SEI by more than 800 points. Overall, almost one-third (31.2%) of all supplemental applicants exhibited IRS-based SEIs which exceeded their BEOG SEIs by more than 800 points (22.2%, eligible dependents; 30.5% eligible independents; 26.1%, ineligible dependents; 38.9%, ineligible independents).

Further, while ineligible supplemental applicants provided less accurate estimates than eligibles and were just as likely to underestimate their anticipated financial circumstances as eligibles, the data in Tables B.17 indicated that ineligible applicants were far more likely to overestimate their financial situations than eligible applicants. Whereas 18.8 percent of all ineligible supplemental applicants exhibited IRS-based SEIs which were more than

200 points lower than the BEOG SEIs this was so for 6.6 percent of all eligible supplemental applicants.[1/]

In terms of income ranges, Tables B.18, B.19, and B.20 indicate that low income supplemental applicants exhibited more nearly comparable IRS-based and BEOG SEIs than higher income supplemental applicants. This again is not surprising in that the lower income applicants had a more restricted range in which to generate estimates. Also, while underestimates exceed overestimates for all income groups, it should be noted that the higher the income estimate, the more likely that the estimate will be an overestimate.

In brief, then, the data from supplemental applicants would suggest: 1) that few awards are made in accordance with an applicants' actual resources and 2) that this problem is derived, in part, from the seeming inability of supplemental applicants to generate reasonably accurate income and tax estimates. Increasing the accuracy of supplemental applications would appear to be precluded by the nature of the considerations that underlie the supplemental application process in the first place. However, because of the extensive misallocation of Basic Grant awards among the supplemental application group, BSFA may wish to consider procedures to validate the propriety of selected supplemental applications to ensure that only those applicants qualifying for this application procedure are receiving Basic Grants under its provisions.

[1/] This finding may be an artifact in that "eligibles" as a group, may be better at estimating their circumstances than "ineligibles". That is, just because more ineligibles overestimate their incomes and federal taxes than eligibles may say nothing about eligible applicants. It may simply mean that ineligibility is associated with poor estimation.

EXECUTIVE SUMMARY

This report presents the findings of the 1976-77 Internal Revenue Service Comparison Study. The purposes of this study were to:

- replicate the 1974-75 IRS Comparison Study;
- conduct a detailed analysis of discrepancies between data reported on 1976-77 BEOG applications and 1975 federal income tax forms;
- conduct an analysis of the effectiveness of several BEOG quality control procedures; and
- investigate issues concerning income earned by dependent BEOG applicants.

The data for this study were obtained by matching 1975 Internal Revenue Service tax records with 1976-77 Basic Grant Student Eligibility Reports. From an initial sample of 212,263 regular and supplemental applicants, IRS matches were obtained for 145,859 (68.7%). Non-matches largely involved very low income families who were not required by law to file tax returns.

In general, the results of the 1976-77 IRS Comparison Study revealed a slight decrease in the overall accuracy of the data furnished by BEOG applicants relative to 1974-75. However, despite this decline, BEOG data continue to exhibit much higher accuracy relative to other financial reporting mechanisms.

The decline in accuracy rates in the 1976-77 study occurred among higher income applicants. Low income applicants appeared to evidence increased accuracy while middle income applicant accuracy remained stable. Significant increases in accuracy were noted among independent applicants. Accuracy rates among supplemental applicants remained relatively poor.

Recalculating Student Eligibility Indices (SEIs) based on IRS data resulted in substantial <u>decreases</u> in eligibility among applicants who:

- evidenced large discrepancies between BEOG-reported federal income taxes and computed federal income taxes;
- individuals who used the Basic Grant "correction" procedure to effect large gains in award eligibility; and

- individuals whose BEOG eligibility was based on processing assumptions about their adjusted gross incomes.

Subsequent to the 1976-77 application year, the BEOG processing system was modified to edit more stringently applications from students meeting the above-mentioned characteristics. However, it was noted that applicants who changed adjusted gross income in response to processing edits in 1976-77 were no more accurate in the reporting of this information than applicants who changed income data without the prompting of income-related edits. This would suggest that further research should be undertaken to determine if, in fact, the newer tightened edit procedures effect increases in the accuracy of income reporting, as intended.

Finally, the present study noted that although many eligible dependent applicants had taxable income for 1975, little of their income was considered in the determination of Basic Grant eligibility, except insofar as students saved this money and reported it as applicant resources.

5

SPECIAL ISSUES RELATED TO QUALITY CONTROL

Background

Whereas Chapter 4 examined the accuracy of selected BEOG application data items for the 1976-77 program year, the purpose of this chapter is to examine selected special issues related to Basic Grant quality control. Specifically, data are presented which relate to:

- the utility of validation criteria currently used in pre-award validation activities;
- the effectiveness of a limited set of current application processing edits; and
- the potential of selected applicant/parent characteristics for future validation criteria.

Many of the analyses presented in this chapter are based on the comparison of Student Eligibility Indices (SEI) computed from BEOG-reported data with SEIs computed by substituting data from IRS records into the SEI calculation algorithm. Unless otherwise noted, the only data elements substituted were adjusted gross income and federal income taxes. Although household size data were also available for comparison, it was decided to use only the income and tax data because these two items should almost always be exactly comparable on both BEOG applications and IRS records. As indicated in Chapter 3, there are several reasons why household size data may not be equivalent. Consequently, rather than risk an overestimate of the magnitude of potential SEI discrepancies, a more conservative approach was adopted which

would estimate with confidence the minimum discrepancy between BEOG and IRS-based SEIs.[1/]

The comparison of BEOG-SEIs of record with those computed with IRS data provides a great deal of information about the extent of misreporting. To help reduce this misreporting, the Basic Grant applicati processing system has incorporated several edit checks of applications. From the comparison of BEOG-SEIs of record with IRS substitution SEIs, it is not possible to determine whether the SEIs of record reflect smaller or larger discrepancies than did initial applications filed before editing took place. Therefore, a series of analyses on a small set of criteria were undertaken to compare the size of the discrepancy of data reported initially to BEOG with the size of the discrepancy on the latest BEOG record. That is, we asked the question, were the data more accurate before or after a correction was submitted. These data pertain to certain validation criteria analyzed in this chapter and are incorporated into the discussion of those analyses.

The utility of selected validation criteria used in Basic Grant pre-award validation activities

Beginning with the 1978-79 Basic Grant application year the Bureau of Student Financial Assistance instituted a pre-award validatio process. Applications that exhibited certain data configurations were flagged and the applicant was instructed to have his/her application data verified by a financial aid officer before the student could receive a Basic Grant award.

[1/] To the extent that income and tax data are complicated due to divorce, separation, or separate IRS filing status, then one would anticipate that SEIs recomputed by substituting IRS data for BEOG data could still result in a degree of error that would impact the interpretation of IRS-based SEIs. However, there is no way to effectively deal with this particular problem due to the constraints imposed by the confidentiality requirements for this study.

Since the 1978-79 validation selection criteria are tied to changes in application processing that were introduced during 1978-79, it was not possible to fully investigate the value of the criteria by using 1976-77 data. However, it is possible to explore this issue to a limited extent, and to obtain baseline data on how effective the criteria would have been in 1976-77.

Pre-award selection criteria are divided into three groups: "A" Series, "B" Series, and "C" Series. "A" Series criteria address specific data items on the application and responses to application rejection whereas the "B" and "C" Series refer to nonrejected applicants who obtained a more favorable eligibility rating by submitting corrections. Data pertaining to criteria in each of these groupings are presented in turn.

"A" Series Pre-Established Criteria

The 1977-78 IRS Comparison Study obtained data pertaining to two of the "A" Series criteria: reported taxes paid are greater than 70 percent (and $300) of computed taxes (Criterion #6); and adjusted gross income is blank or negative (Criterion #8).

With respect to the taxes paid criterion, the following text table indicated that substituting IRS data for BEOG-reported adjusted gross income and taxes paid information in the SEI computation formula results in IRS-based SEIs which are substantially higher than BEOG-based SEIs if the discrepancy between BEOG-reported taxes and computed taxes exceeds $400. More than 24 percent of all regular applicants (eligible as well as ineligible) whose reported taxes exceeded computed taxes by $400 or more exhibited IRS-based SEIs which were 400 or more points higher than their BEOG SEIs of record.

	Total Study Group	BEOG taxes consistent with computed taxes within $200	BEOG taxes inconsistent with compute taxes by mor than $400
	% of column	% of column	% of column
IRS SEI within 50 points of BEOG SEI	70.9	69.8	22.45
IRS SEI more than 400 points higher than BEOG SEI	8.0	5.9	24.3
	N=1,764,803	N=1,206,588	N=204,611

Table 5.1 presents more focused information on this same issue with respect to eligible regular filers. These data indicate that among eligibles, 27 percent of the applicants whose BEOG-reported taxes were inconsistent with computed taxes by 400 or more dollars exhibited IRS-based SEIs that were 400 or more points higher than their SEIs of record. Further, of the 34,768 regular eligible applicants whose reported taxes were inconsistent with computed taxes by $800 or more, more than 42 percent had IRS-based SEIs that exceeded their BEOG SEIs of record by 400 or more points.

These data clearly indicate that inconsistencies between reported adjusted gross income and reported federal taxes are good indicators of potentially problematic BEOG applications. In fact, the policy issue presented by these data is whether the current edits should be tightened. For example, consideration may be given to rejecting any application on which BEOG-reported taxes are within $300 of the computed tax. Additional discussion of the tax inconsistency edits may be found in a later section of the chapter (p. 5.23).

Whereas the taxes paid criterion was shown to be indicative of misreporting, such is not the case with the negative income criterion. As the following text table indicates, most applicants reporting negative incomes exhibit IRS-based SEIs which are very close to their BEOG SEIs of record (62% of the IRS-based are within ± 50 points

TABLE 5.1: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs BY MAGNITUDE OF INCONSISTENCY BETWEEN BEOG-REPORTED ADJUSTED GROSS INCOME AND FEDERAL INCOME TAXES--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	AGI Consistent w/Taxes Within $200 % Column	AGI Not Consistent w/Taxes by $201-400 % Column	AGI Not Consistent w/Taxes by $401-600 % Column	AGI Not Consistent w/Taxes by $601-800 % Column	AGI Not Consistent w/Taxes by Over $800 % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.2	68.7	28.5	23.1	15.5	11.2
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)						
IRS SEI > BEOG SEI	16.2	10.2	15.0	5.8	5.1	3.5
BEOG SEI > IRS SEI	11.5	13.4	6.2	5.8	2.5	2.2
Moderate Discrepancy (IRS SEI ± 51-400 of BEOG SEI)						
IRS SEI > BEOG SEI	13.5	6.1		30.5	37.9	29.2
BEOG SEI > IRS SEI	4.7	3.8		9.1	10.5	8.9
Large Discrepancy (IRS SEI>± 400 of BEOG SEI)						
IRS SEI > BEOG SEI	9.7	7.0	12.0	16.4	25.9	42.1
BEOG SEI > IRS SEI	1.2	.9	2.2	2.3	2.8	2.0
	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL	(N=993,793)	(N=794,787)	(N=101,505)	(N=47,946)	(N=24,735)	(N=34,368)

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of the BEOG SEIs). Further, very few applicants reporting negative incomes exhibited IRS-based SEIs that were substantially larger (≥400 points) than their BEOG SEIs.

	Total Study Group % of column	Negative Income Reported % of column	Positive or Zero Income Reported % of column
IRS SEI within 50 points of BEOG SEI	67.3	61.5	67.4
IRS SEI more than 400 points higher than BEOG SEI	21.3	1.9	21.4
	N=1,103,760	N=5,365	N=1,098,396

Consequently, continued use of the negative income criterion for selecting applications for pre-award validation would appear to be unwarranted.

"B" Series Pre-Established Criteria

The "B" Series validation criteria identify applicants who establish eligibility through the applications corrections processing system after initially being ineligible to receive a Basic Grant award. Data were examined to determine the accuracy of data provided by this group of applicants after their Student Eligibility Reports (SERs) had been submitted for corrections.

As the data in the following text table indicate, applicants who establish eligibility through the corrections process after initially being ineligible for a Basic Grant award were more likely to exhibit IRS-based SEIs which were at variance with their BEOG SEIs of record than students who were eligible throughout all Basic Grant transactions. Whereas only 8.1 percent of the students eligible in all transactions exhibited IRS-based SEIs 400 or more points greater than their BEOG SEIs, this was so for more than 19 percent of those applicants who were initially ineligible to receive an award.

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It should be pointed out that the absolute frequency of initially ineligible applicants with highly discrepant BEOG/IRS SEIs is small. Further, a substantial majority of this group (57%) exhibit IRS-based SEIs which are within ± 50 points of their BEOG SEIs of record. Nevertheless, the data substantiate earlier data[1/] which indicate that there appears to be considerable misuse of unsolicited corrections.[2/]

Also of interest is the fact that students who establish eligibility after initially being rejected also exhibit substantial discrepancies between IRS-based and BEOG-based SEIs, but not to the same degree as the initially ineligible group.

	Total % Of Column	Eligible After Previous Rejection % Of Column	Eligible on All Application Transaction % Of Column	Eligible After Previous Ineligibility % Of Column
IRS SEI within 50 points of BEOG SEI	70.6	64.4	72.0	57.0
IRS SEI more than 400 points higher than BEOG SEI	9.1	13.7	8.1	19.3
	N=1,103,775	N=144,888	N=932,999	N=25,888

Given the rate of discrepancy when the applicant submits a correction after rejection, we compared the size of discrepancies before the edit with the size of the discrepancies after the edit. This comparison revealed that 72.9 percent of the applicants who became eligible after rejection had the same accuracy rate as they did at the point they were rejected. Another 5.1 percent had a change of $500 or less in the size of the discrepancy. The remaining 21.9 percent of these

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1/ Vogel, R.J. Analysis of the Basic Grant Application Corrections Process prepared pursuant to Office of Education Contract No. 300-76-0354 for the Division of Basic and State Student Grants, Applied Management Sciences, Inc., 1977.

2/ Beginning with the 1978-79 BEOG application year, the Bureau of Student Financial Assistance instituted additional quality controls with respect to the corrections processing procedure. These actions appear to have been effective in reducing the scope of system abuse.

applicants had differences that were greater than $500. In two-thirds of these cases, the income reported after rejection was $500 + more discrepant than the income reported at rejection, and in one-third of these cases, the income at rejection was $500 + more discrepant. Clearly, this reveals that information reported after rejection is likely to be more discrepant than the income reported at rejection. More accurate information was obtained in less than ten percent of the cases while more discrepant information was obtained in about 18 percer of the cases. This finding indicated that the edits used in 1976-77 were not working as they were intended, and that in 18 percent of the cases, they worked to increase the inaccuracy of the data. This finding did not vary by applicant dependency status, as shown in the text table on the next page.

	All New Eligibles % column	New Eligible Dependents % column	New Eligible Independents % column
New Income data more discrepant by:			
$501 or more	14.0	14.5	13.0
$1 to $500	3.6	2.8	4.8
Same rate of accuracy	72.9	72.2	73.9
Income data at rejection more discrepant by:			
$1 to $500	1.6	1.8	1.2
$501 or more	7.9	8.5	7.0
	n=229081	n=140675	n=88405

More detailed data addressing SEI discrepancies among initially ineligible/rejected applicants who establish eligibility through the corrections process are presented in Table 5.2.

TABLE 5.2: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs BY INITIAL APPLICATION REJECTION/BASIC GRANT INELIGIBILITY--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	Eligible After Rejection on Previous Transaction % Column	Eligible After Being Eligible on Previous Transaction % Column	Eligible on All Transactions % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.6	45.7	29.9	43.7
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)				
IRS SEI > BEOG SEI	15.3	10.9	16.7	16.0
BEOG SEI > IRS SEI	11.7	7.8	11.4	12.3
Moderate Discrepancy (IRS SEI ± 51-400 of BEOG SEI)				
IRS SEI > BEOG SEI	12.7	13.1	14.0	12.6
BEOG SEI > IRS SEI	6.2	6.7	6.9	6.1
Large Discrepancy (IRS SEI ± 400 of BEOG SEI)				
IRS SEI > BEOG SEI	9.1	13.7	19.3	8.1
BEOG SEI > IRS SEI	1.4	2.0	1.9	1.2
	100.0	100.0	100.0	100.0
TOTAL	(N=1,103,775)	(N=144,888)	(N=25,888)	(N=932,999)

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"C" Series Criteria

The "C" Series validation criteria identify applicants who utilize the corrections processing system to reduce their SEIs by 400 or more points. Again, the IRS Comparison Study examined the accuracy of data provided by this group of applicants by comparing IRS-based SEIs with BEOG SEIs of record.

The following text table presents an overview of the results of these SEI comparisons. This table clearly indicates that individuals who submit corrections that result in substantial reductions in their SEIs exhibit IRS-based SEIs that are much more likely to be discrepant from their BEOG SEIs of record than individuals who do not submit corrections. More than 22 percent of those submitting SER corrections resulting in SEI decreases of 400 or more points exhibit IRS-based SEIs which are 400 or more points higher than their BEOG SEIs of record This is so for only 6.4 percent of the 1977-78 BEOG applicant group that submitted no corrections.

	Total Study Group % of column	No Corrections % of column	SEI Reduced More than 400 points % of column
IRS SEI within ± 50 points of BEOG SEI	81.2	82.5	66.0
IRS SEI more than 400 points higher than BEOG SEI	7.2	6.4	22.3
	1,962,359*	1,628,221	53,220

*Eligible and ineligible filers, regular applicants only.

Considering only the SERs of eligible applicants, Table 5.3 indicates that IRS-based SEIs reflect the general trends noted in the above text table. However, it should be pointed out that of the eligible

TABLE 5.3: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs BY MAGNITUDE OF BEOG SEI REDUCTIONS ACHIEVED THROUGH SER CORRECTIONS--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	No Corrections % Column	Corrections, No SEI Reduction % Column	SEI Reduced up to 200 Points % Column	SEI Reduced 201-400 Points % Column	SEI Reduced 401-600 Points % Column	SEI Reduced 601 + Points % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.6	43.7	46.8	34.0	29.2	31.2	33.9
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)							
IRS SEI > BEOG SEI	15.3	16.1	11.5	18.5	20.3	14.6	13.4
BEOG SEI > IRS SEI	11.7	12.4	8.6	12.6	11.4	12.4	9.0
Moderate Discrepancy (IRS SEI ± 51-400 of BEOG SEI)							
IRS SEI > BEOG SEI	12.7	12.5	13.0	18.3	17.9	14.7	12.7
BEOG SEI > IRS SEI	6.2	6.1	6.8	7.2	8.4	7.6	6.2
Large Discrepancy (IRS SEI > ± 400 of BEOG SEI)							
IRS SEI > BEOG SEI	9.1	8.1	11.2	7.8	10.8	17.1	23.3
BEOG SEI > IRS SEI	1.4	1.2	2.1	1.5	2.0	2.4	1.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL	(N=1,103,775)	(N=871,459)	(N=172,710)	(N=11,413)	(N=7,851)	(N=5,144)	(N=35,199)

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applicants submitting corrections resulting in SEI decreases, the majority submit corrections resulting in SEI decreases of more than 600 points and of this group, 43.7 percent exhibit IRS-based SEIs that are discrepant by more than 50 points of their BEOG SEIs of record.

It may be concluded, then, that "C" Series criteria should be effective in identifying Basic Grant applicants whose SEIs are likely to be based on inaccurate data.

Before proceeding to the second issue area considered in this chapter, it should be pointed out that the above data indicate that applicants meeting pre-established validation criteria are relatively more likely to report BEOG data that are highly discrepant with IRS-reported data. However, in absolute terms, the majority of substantial BEOG/IRS discrepancies are evidenced among applicants who will probably never be subjected to any of the existing Basic Grant validation procedures. This is a significant point to consider, because it underscores the fact that validation procedures, as they are currently structured, will never be totally effective in controlling program misreporting. Further, it is unreasonable to expect the elimination of all error unless BSFA initiates a policy which would require preaward validation of all Basic Grant applications. This latter procedure, though, would no doubt cost more than the program savings it would effect.

The effectiveness of selected application processing edits

In addition to examining the utility of selected pre-established validation criteria, this study also examined data related to selected processing edits used during the 1976-77 BEOG application year. While processing edits were altered considerably for the 1978-79 processing year, the data presented in this section do provide some insight as to whether edits effectively flag applications with a high probability of actually being in error. Again, the standard by which effectiveness is measured is whether IRS-based SEIs are comparable to BEOG SEIs when IRS data are substituted for BEOG-reported information in the SEI computation algorithm.

Adjusted Gross Income Assumptions

In certain special circumstances, a 1976-77 applicant's adjusted gross income is assumed on the basis of additional application information available to the applicant processor. The applicant is informed of this assumption and is asked to review the assumed information for correctness.

The following text table indicates that in general, assumed adjusted gross incomes are not very accurate. Among those applicants, eligible or ineligible, for whom adjusted gross income assumptions were not required, 70 percent exhibited IRS-based SEIs that were within 50 points of their BEOG SEIs of record. This was so for 53.9 percent of those applicants who had assumptions made concerning their adjusted gross income and modified these assumptions, and 53 percent of those receiving adjusted gross income assumptions for which no modifications were submitted. Furthermore, proportionately three times as many applicants requiring income assumptions had substantially discrepant IRS/BEOG SEIs (IRS-based SEI 400 or more points higher than the BEOG SEI) as did applicants who did not require assumed incomes.

	Total Study Group % of Column	AGI Assumed, No Changes % of Column	AGI Assumed, Changes % of Column	AGI Not Assumed % of Column
IRS SEI within 50 points of SEI	69.7	53.0	53.9	70.0
IRS SEI more than 400 points higher than BEOG SEI	7.6	19.5	20.0	7.3
	N=1,962,359	N=39,214	N=3,206	N=1,919,939

Considering only those applicants who were eligible to receive a Basic Grant award, the data in Table 5.4 indicate the same general patterns as noted in the above text table. Eligible applicants reveal a slight tendency to be less accurate than the BEOG applicant population as a whole, but this would not appear to be related to whether

TABLE 5.4: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs BY ASSUMED BEOG ADJUSTED GROSS INCOME--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	AGI Assumed and Modified by Applicant % Column	AGI Assumed and Not Modified % Column	AGI Not Assumed % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.6	48.5	39.9	43.5
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)				
IRS SEI > BEOG SEI	15.3	7.6	10.6	15.6
BEOG SEI > IRS SEI	11.7	4.0	6.1	11.9
Moderate Discrepancy (IRS SEI ± 51-400 of BEOG SEI)				
IRS SEI > BEOG SEI	12.7	15.0	12.8	12.6
BEOG SEI > IRS SEI	6.2	3.7	3.4	6.3
Large Discrepancy (IRS SEI > ± 400 of BEOG SEI)				
IRS SEI > BEOG SEI	9.1	19.5	21.8	8.8
BEOG SEI > IRS SEI	1.4	1.7	5.3	1.3
	100.0	100.0	100.0	100.0
TOTAL	(N=1,103,775)	(N=31,945)	(N=2,743)	(N=1,069,088)

income assumptions were made or not. Rather, this trend is consistent with the overall tendency for eligible applicants to evidence more application error than their ineligible counterparts.

In summary, then, the above data would suggest that BSFA maintain its current procedure of not assuming adjusted gross income based upon other available application information. Situations which currently give rise to assumed incomes may be better suited to rejection or pre-award validation to ensure the accuracy of data on which the awards will be made.

Requested Corrections to Income

The 1977-78 processing edits treated suspect income-related data fields in one of several ways. First, the applicant could be asked to review his/her income data for accuracy, but no action was required of the applicant to establish eligibility. Secondly, the applicant might be rejected and asked to review income data for accuracy, but by simply attesting to the accuracy of the original information, the applicant could resubmit his/her SER and establish Basic Grant eligibility. Finally, the applicant could be rejected because of suspect or inconsistent income data and asked to supply the information in question. While data examined in this report do not permit distinctions among these three alternative "income correction" requests, these data do permit an assessment of the accuracy of the data actually provided by applicants who change income data in response to income edits.

As the data in the following text table indicate, the comparability of IRS-based SEIs with those of the BEOG application of record parallels the patterns noted above in the "assumed adjusted gross income" discussion. That is, applicants who changed income data in response to edits to review/modify income data are proportionately three times more likely to exhibit IRS-based SEIs which are 400 or more points higher than their BEOG SEIs of record compared to applicants who never modified income data. Further, the data in this table indicate that applicants who change income data in response to processing edits are

no more accurate in the reporting of this information than applicants who change income without the prompting of income-related edits.

	Total Study Population % Of Column	Corrections Made; Corrections Requested % Of Column	Corrections Made; Corrections Not Requested % Of Column	No Correction To Income % Of Column
IRS SEI within 50 points of BEOG SEI	69.7	51.6	53.7	70.7
IRS SEI more than 400 points higher than BEOG SEI	7.6	21.0	17.2	6.9
	N=1,962,359	N=8,101	N=117,991	N=1,836,268

Considering only those applicants who were eligible to receive a Basic Grant award, the data in Table 5.5 reveal the same general patterns as the above text table.

Given the magnitude and size of discrepancies resulting from corrections, the validity of income was examined before the correction was submitted. There was no change in the size of income discrepancies for 77.9 percent of all applicants receiving edits. Ineligibles, however, had a lower incidence of no change (75.1 percent). New data were more discrepant for 13 percent of the total population receiving comments wi ineligibles having a higher rate of large discrepancies (14.8 percent over $500). In 7 percent of the cases the initial data reported to BEO was more discrepant by over $500. In general, large discrepancies (over $500) occurred slightly more often for dependents than for independents as Table 5.6 indicates. The largest proportions of discrepant income occur in the over $5,000 discrepancy categories--whether the new data are more or less discrepant from IRS data than the initial income data. Where the new income data is $5,001 or more discrepant from IRS, there is a clear trend for upper income applicants to have larger discrepanci more frequently than applicants with lower BEOG reported incomes. Indeed 17 percent of those with BEOG-reported incomes of $15,001 to $17,500

TABLE 5.5: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs, BY WHETHER CORRECTIONS WERE REQUESTED TO BEOG-REPORTED ADJUSTED GROSS INCOME--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	Corrections Requested, Income Changed % Column	Corrections Not Requested, Income Changed % Column	No Corrections to Income % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.6	40.7	39.9	44.0
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)				
IRS SEI > BEOG SEI	15.3	7.9	10.6	15.8
BEOG SEI > IRS SEI	11.7	4.6	7.5	12.0
Moderate Discrepancy (IRS SEI ± 51-400 of BEOG SEI)				
IRS SEI > BEOG SEI	12.7	14.8	14.6	12.5
BEOG SEI > IRS SEI	6.2	6.9	6.9	6.2
Large Discrepancy (IRS SEI > ± 400 of BEOG SEI)				
IRS SEI > BEOG SEI	9.1	21.8	17.8	8.3
BEOG SEI > IRS SEI	1.4	3.3	2.6	1.2
	100.0	100.0	100.0	100.0
TOTAL	(N=1,103,775)	(N=6,411)	(N=84,056)	(N=1,013,308)

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TABLE 5.6: COMPARISON OF INCOME DISCREPANCIES FROM IRS DATA BETWEEN INITIAL APPLICATION AND BEOG SER OF RECORD: CORRECTIONS TO INCOME FOR ALL CATEGORIES OF APPLICANTS

	All Eligibles % column	Eligible Dependents % column	Eligible Independents % column	All Applicants % column	All Ineligibles % column	Ineligible Dependents % column	Ineligible Independents % column
New Income Data More Discrepant By:							
More than $500	10.7	10.7	9.1	11.1	14.8	15.9	12.8
$1 to $500	2.7	2.1	3.6	2.4	1.7	1.4	2.3
Same rate of accuracy	78.7	78.2	79.5	77.9	75.1	76.8	71.7
Initial Income Data More Discrepant By:							
$1 to $500	1.4	1.5	1.2	1.6	2.2	1.9	2.7
More than $500	7.1	7.4	6.5	6.9	6.2	4.0	10.4
	n=103,609	n=86,680	n=79,417	n=202,382	n=36,284	n=24,545	n=11,738

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had larger discrepancies in their BEOG records after corrections were requested, than they had before corrections were made. Only 13 percent of those with BEOG-reported incomes of $0 changed their incomes whereas 30 to 40 percent of those in the upper income bracket (over $10,000) had changes in the size of the discrepancy. Most of the changes in discrepancy size occurred in the direction of increasing discrepancy for corrected incomes. (See Table 5.7.)

Interestingly, changes in SEIs as a result of edits were approximately 10 percent whether the edit resulted in an increase or decrease of 50 points or more. For over 80 percent, SEIs do not change appreciably (less than 50 points) due to edits. Among independents, changes in both directions were higher than for dependents. Decreases for eligible independents due to edit changes occurred for 15.2 percent of the students in this category, whereas decreases occurred for 7.7 percent of eligible dependents. The smallest increases in SEI were among ineligible dependents (6.4%) while the smallest decreases were among eligible dependents (7.6%). (An estimated 202,382 applicants submitted a correction in response to rejection and became eligible; an estimated 251,227 remained or became eligible; and some 2,071,135 did not receive edits). Table 5.8 presents these data in more detail.

Results of analyses of corrections to income data indicate that applicants who make income changes in response to processing edits are more likely to report inaccurate information than those individuals who submit "unsolicited" income corrections. Also, those who submitted corrections as a result of edits seem to have had a higher rate of discrepancy and an increase in the size of discrepancy from IRS data after the edit as before. This would seem to indicate that income edits do not necessarily improve the accuracy of suspicious applicant income data. Rather, it may be that calling attention to these data fields abets applicant reporting inaccuracy. Or it may be that some applicants who receive edits involve situations such as divorce in the family, that result in atypical income or other figures.

TABLE 5.7: CORRECTIONS TO INCOME REQUESTED FOR ALL APPLICANTS (WITH INCOME REPORTED)

MAGNITUDE OF DISCREPANCY OF INCOME CHANGE FROM IRS REPORTED DATA	TOTAL	BEOG-REPORTED INCOME RANGE								
		LESS THAN $1,001	$1,001-$2,000	$2,001-$4,000	$4,001-$6,000	$6,001-$8,000	$ 8,001-$10,000	10,001-15,000	$15,001-$17,500	$17,501 and over
New Income Data More Discrepant										
$5,001 and over	3.9	0.0	0.0	0.2	3.6	6.5	8.4	8.3	16.8	17.7
$3,001-$5,000	2.1	0.0	0.1	5.5	6.2	1.3	1.6	1.9	5.5	3.12
$501-$3,000	5.1	2.1	19.1	10.3	3.4	4.0	4.6	5.6	6.5	1.2
$1-$500	2.4	3.1	1.9	1.5	2.5	2.4	2.2	3.0	1.9	.43
0	77.9	86.9	68.4	73.0	76.4	76.4	72.3	72.4	61.5	72.8
Initial Income Data More Discrepant										
$1-$500	1.6	0.8	1.7	1.7	1.6	1.9	1.8	2.4	2.5	3.1
$501-$3,000	2.4	2.2	3.2	2.3	2.3	2.3	3.0	2.5	3.9	0.8
$3,001-$5,000	1.2	1.6	.9	1.2	0.8	0.8	1.5	0.7	0.2	0.7
$5,001- and over	3.4	3.2	4.7	4.2	3.3	4.5	4.6	3.1	1.2	0.2
	n=433553	157567	27266	50251	46881	37616	31077	46415	14356	22121

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TABLE 5.8: CHANGE IN SEI DUE TO CORRECTIONS REQUESTED FOR ALL CATEGORIES OF APPLICANTS

	All Applicants % of column	All Eligibles % of column	Eligible Dependents % of column	Eligible Independents % of column	All Ineligibles % of column	Ineligible Dependents % of column	Ineligible Independents % of column
SEI Increase (more than 400 points)	8.1	8.4	7.9	9.5	7.1	5.2	10.6
SEI Increase (51-400 pts)	1.5	1.6	2.0	.8	1.0	1.2	.7
SEI (+ 50 pts)	80.0	79.8	82.4	74.4	82.0	85.0	76.7
SEI Decrease (51-400 pts)	1.1	.9	1.1	.5	.7	.6	.9
SEI Decrease (more than 400 points)	9.2	10.4	6.6	14.7	9.0	7.9	11.0
Total	n=251,227	n=191,388	n=129,832	n=61,555	n=59,839	n=38,378	n=21,460
Applicant Rejected	n=202,382	n=103,609	n=86,680	n=794,117	n=36,284	n=24,545	n=11,738

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Rejection for Tax Inconsistencies

The final set of processing edits considered in this chapter involve those edits that result in applicant rejection for inconsistent and/or suspicious federal tax data. As the following text table reveals, the accuracy of application data supplied by individuals initially rejected for tax data problems is substantially lower than applicants who were never rejected or rejected for reasons other than tax-related issues. Fifty-four percent of the entire BEOG applicant population (eligible as well as ineligible regular filers) exhibited IRS-based SEIs that were within 50 points of the BEOG SEIs of record. The comparable proportion for those never rejected is 70.7 percent. For those rejected for other than reasons of problematic tax data, the comparable proportion is 61.7 percent. From another perspective, applicants rejected for tax reasons were proportionately two to three times more likely to exhibit IRS-based SEIs that were 400 or more points higher than their BEOG SEIs depending on the other study groups considered.

	Total study group	Rejected for "Taxes Paid" reasons	Rejected for other than taxes paid reasons	Never Rejected
	% of column	% of column	% of column	% of column
IRS SEI within 50 points of BEOG SEI	69.7	53.9	61.7	70.7
IRS SEI more than 400 points higher than BEOG SEI	7.6	21.1	11.9	7.0
	N=1,962,359	N=17,904	N=192,706	N=1,751,749

Again, a review of data pertaining only to those applicants who were eligible to receive a Basic Grant award revealed few differences in the accuracy (or inaccuracy) of application data reported by individuals initially rejected for problematic tax information that are not already noted in the above-text table. (See Table 5.9.)

TABLE 5.9: DISCREPANCIES BETWEEN IRS-BASED AND BEOG SEIs, BY WHETHER APPLICANT WAS INITIALLY REJECTED FOR PROBLEMATIC FEDERAL INCOME TAX DATA--REGULAR ELIGIBLE APPLICANTS ONLY

Magnitude of SEI Discrepancy	Total % Column	Initially Rejected for Taxes Paid Reasons % Column	Initially Rejected for Non-Tax Related Reasons % Column	Never Rejected % Column
No Discrepancy (IRS SEI = BEOG SEI)	43.6	39.0	46.4	43.3
Mild Discrepancy (IRS SEI ± 50 of BEOG SEI)				
IRS SEI > BEOG SEI	15.3	11.4	10.8	16.0
BEOG SEI > IRS SEI	11.7	4.2	8.2	12.2
Moderate Discrepancy (IRS SEI ± 51-400 OF BEOG SEI)				
IRS SEI > BEOG SEI	12.7	17.7	12.6	12.6
BEOG SEI > IRS SEI	6.2	3.8	7.0	6.2
Large Discrepancy (IRS SEI > ± 400 of BEOG SEI)				
IRS SEI > BEOG SEI	9.1	23.2	12.8	8.4
BEOG SEI > IRS SEI	1.4	.7	2.2	1.3
	100.0	100.0	100.0	100.0
TOTAL	(N=1,103,775)	(N=15,364)	(N=131,524)	(N=958,887)

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If we examine the size of the discrepancies between initial tax data and the IRS data, as well as those between new tax data submitted as part of the corrections process, we find a notable decrease in discrepancy rates in the new tax data. Indeed, initial tax data were twice as likely to be discrepant with IRS data as data provided after the corrections process. Ineligibles were almost twice more likely than eligibles to have had discrepant tax data both before and after corrections, as the text table below indicates:

	Total Study Group % of column	All Regular Eligibles % of column	Regular Ineligibles % of column
New Tax Data More Discrepant	8.8	7.2	17.4
No Change	71.8	76.4	48.2
Initial Tax Data More Discrepant	19.3	16.4	34.4
	n=151,889	n=127,143	n=24,746

The implications of the results of analyses of corrections to taxes are similar to the implications of data addressing solicited income corrections. Despite the edits applicants receive that indicate problems with federal tax information, their SERs of record were still far less accurate than those of applicants who were not rejected as a result of suspect tax data. The edits did appear to reduce the frequency of occurrence of large discrepancies significantly, but, over three-fourths of those who received edits for taxes paid did not change their SERs in such a way that the size of the discrepancy from IRS data was changed. This may mean that the initial discrepancies were small or were justified in some way for those applicants who were eligible. Consequently, it would appear that the system of edits designed to identify potential application problems with respect to tax data was only moderately effective.

However, the newer system of tax edits are more explicit in their description of the reason why an individual's application was rejected. The edits used during the 1976-77 academic year were rather vague about the specific reason why an application was rejected and this fact may explain why study data indicated that some applicants continued to provide poor quality data despite their initial rejection. Further, recent data have indicated that these new edits may be, in fact, more effective than those previously used in securing accurate application information.[1/] Therefore, alternative quality control mechanisms to the existing tax edit procedures should not be considered until a more complete evaluation of these new edits is available.

Potential Applicant/Parent characteristics for future validation selection criteria

The final issue addressed in this chapter is the utility of certain applicant/parent characteristics that might serve to identify individuals for future validation initiative based on data reported on first valid SERs. The approach taken with respect to this issue was simply to review discrepancies between IRS-based SEIs and BEOG SEIs computed for first valid SERs and to identify which applicant characteristics were more likely to be associated with large discrepancies.

The characteristics selected are presented in Table 5.10. A characteristic was chosen if at least 10 percent of the applicants with a given characteristic exhibited discrepancies of 400 or more points between IRS-based SEIs and their BEOG SEIs on their first valid SER.

1/ Kuchak, JoAnn, and Maureen Murphy. The Preaward Validation (PAV) Study: Phase I, prepared for the Office of Education pursuant to contract No. 300-76-0354 by Applied Management Sciences, Inc., 1979.

As can be seen from the list of characteristics presented, few stand out by themselves as potentially useful criteria. Aside from certain tax data characteristics, most characteristics in Table 5.7 identify relatively small numbers of applicants with likely application errors.

TABLE 5.10: CHARACTERISTICS OF BEOG APPLICANTS WHOSE IRS-BASED SEI WAS DISCREPANT BY 400 OR MORE POINTS FROM BEOG SEIs FROM FIRST APPLICATION OF RECORD--REGULAR ELIGIBLE APPLICANTS ONLY

		BEOG SEI/IRS SEI*	
Applicant/Parent Attribute	Percent of Eligibles First Transaction	Accurate Within 50 Points	Inaccurate ** by 400 or More Points
Computed taxes differ from reported taxes by more than $300	3.8	15.0	48.8 (37.6)
Reported BEOG taxes exceeds $1500	5.3	32.7	32.9 (26.3)
Computed taxes differ from reported taxes by $601-$800	2.5	22.7	30.6 (24.3)
Tax exemptions greater than reported household size	.6	54.4	27.5 (12.9)
Reported BEOG taxes between $1000-$1499 and initial SEI ≥ 400	1.5	31.0	27.4 (27.4)
Household Size = 1	12.6	54.1	23.0 (16.6)
Computed taxes differ from reported taxes by $401-$600	4.9	31.2	21.3 (15.3)
Martial status = single	16.7	60.2	19.3 (13.19)
Veteran's Educational Benefits reported	7.2	62.4	17.3 (10.0)
Computed taxes differ from reported taxes by $201-$400	10.3	45.4	16.9 (11.6)
Marital status = single, SEI ≥ 400	10.4	68.1	15.7 (15.7)
Taxes paid $1000 to $1499	1.5	31.0	27.4 (27.4)
Post-high enrollment = 1	65.4	80.9	14.1 (9.6)
Post-high enrollment = 5	.4	64.6	13.1 (9.6)
Initial SEI between 401 and 300	21.4	60.7	12.7 (9.6)

*SEI computed by substituting IRS adjusted gross income and taxes paid into eligibility formula.

**Percents not in parentheses refer to a difference of 400 or more points, regardless of direction; percents in parentheses refer to SEI increases of 400 points or more.

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ANALYSIS OF DEPENDENT STUDENT INCOME

In calculation of eligibility for a 1976-77 Basic Grant award, earned income of dependent students is considered only to the extent that it is an "applicant resource," that is, that it is held in a savings and/or checking account. If a dependent student earns any income after filing a Basic Grant application and spends this income before the next application cycle, none of these earnings will affect the determination of the student's financial need on the next Basic Grant application he/she files.

For the 1976-77 application year, the income of independent students was treated in the same way as parental income was for dependent students. In addition, the independent applicants' resources were treated as applicant resources -- subjected to the one-third contribution stipulation in calculating the SEI. Thus, in the year studied, if an independent student earned money and saved it, the income and the savings both entered into the calculation of the Student Eligibility Index. The independent student might have been assessed twice in the calculation on the same amount of money -- that reported as income and that portion of the income not spent and therefore considered as an applicant resource.

To elaborate, consider the following hypothetical cases of two Basic Grant applicants in the 1976-77 BEOG year. Each student held a summer job the year prior to filing a Basic Grant application and each earned $3,000. Further, assume that one student applies as an independent student, the other as a dependent. Finally, assume that

each student saves $500 of their earnings to help with anticipated educational expenses and that the expected parental contribution to the dependent student's educational costs is zero. Given this situation, the independent student would receive an approximate SEI of 445, whereas the dependent student would receive an SEI of 165. Clearly, the dependent student would obtain a larger Basic Grant award even though it would not be unreasonable to expect that the independent student would incur greater non-educational expenses (maintain a residence, purchase food, and clothing, etc.) than the dependent student for at least part of a given school year. Further, the calculation of the independent student's SEI amounts to "double jeopardy" in the sense that he is first asked to contribute to his educational expenses based on his earned income and then is asked to contribute additional money from funds he saved from the very same earnings already considered in the determination of award eligibility. [1/]

The preceding example ignores other factors that might affect the SEI of the independent students and would change dramatically under current regulations. However, for illustrative purposes, this example clearly shows that present exclusion of dependent student earned income from SEI calculations places dependent students in a position to receive greater assistance than independent students even though their respective resources may be comparable.

In order to assess the extent of difference that their income would make for dependent eligible students if it entered into calculations of Basic Grant eligibility, the present study investigated

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[1/] Recent legislation (P.L. 95-566; Middle Income Student Assistance Act) has altered the manner in which the resources of independent students are considered in the determination of Basic Grant eligibility. This new legislation now requires the resources of independent students to be treated in the same manner as the parental resources of dependent students. As a consequence of this new legislation, the difference in SEIs currently will be smaller than those in the application year treated in this chapter. Despite this new legislation, the dependent student would still have a decided advantage relative to an independent counterpart in terms of award eligibility, all other things being equal.

the following questions in detail:

- How many dependent eligible Basic Grant applicants had taxable incomes for the 1977-78 application year and what are the characteristics of these applicants in terms of distributions by:
  - -- SEI range;
  - -- BEOG-reported income range; and
  - -- amounts of applicant resources reported to Basic Grants?
- What would be the impact upon eligibility indices if dependent student income was explicitly included in the computation of Basic Grant eligibility?

The remainder of this chapter presents data pertaining to these questions.[2/]

Characteristics of Students with IRS-reported Incomes for the 1977-78 Application Year (1976 tax year)

The earnings characteristics of applicants were investigated through a comparison of IRS tax records with BEOG application reports on these items: BEOG Student Eligibility Index, BEOG-reported parental income and BEOG-reported applicant resources. The matching of IRS and BEOG records for dependent student earnings followed the same procedures as those described in Chapter 2, Methodology. The following discussion will concentrate on eligible applicants, although, where of interest, some findings relevant to the entire applicant pool will be presented.

According to IRS records, 43.1 percent of eligible, dependent BEOG applicants had incomes higher than $1,000. Of those applicants whose BEOG-reported incomes were $1,000 or less, 30.9 percent them-

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[2/] The dependent student income issue has also been investigated by the College Board under a contract awarded by the Office of Education. The report, entitled "Dependent Student Income: An Analysis" was prepared in February of 1979. While the results of that study are not markedly different from those discussed in the present chapter, it is important to note differences in study design which make direct comparison between the two reports difficult. The College Board study focused on data from 1977, whereas the present study examined data from 1975. Further, the former study examined records from the College Scholarship Service files whereas the present study examined IRS records of actual BEOG applicants.

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selves earned more than $1,000, and 11.8 percent earned more than $3,000. The proportion of those students earning more than $3,000 remained constant across BEOG-reported parent income ranges as shown in Table 6.1, varying less than one percent from the overall average of 11.8 percent. This is true for nearly all ranges above $3,000; those variations that do occur are not consistently related to either student income or parental income. As student earnings increased above $3,000, the numbers of students in each earning category declined sharply. This was true for all parental income categories. Fewer than 12,000 BEOG dependent applicants (1.1 percent) eligible for grants earned more than $7,000 in 1976-77.

Interestingly, the one parental income category that appears to have more than its expected share of high income student earnings is the under $1,001 category. While students in this category accounted for approximately one-fifth of all eligible applicants, more than one-fourth of all students who earned over $6,000 fall in this category. Thus, it would appear that for the lower income brackets, the earnings of the student would have a tremendous impact on their eligibility for a Basic Grant. However, because this category is the poorest, it may be that the student in the family, working full-time while attending school, is supporting the rest of the family in a significant way.

For those students earning less than $3,001, definite differences among BEOG-reported income categories are evident. As BEOG-reported parent income increased, the percentage of applicants earning $1,000 or less decreased, from 63.1 percent for parents having less than $1,000 income to 50 percent for those whose parents earned more than $17,500. The percentage of students earning between $1,001 - $3,000 increased as parental income increased.

The only differences found between eligible dependents and all dependent applicants taken together is that, among upper parental income ranges, more dependent ineligibles earned $1,001 - $2,000, and fewer were in the $2,001 - $3,000 range. This indicates, perhaps, that ineligible students tend to earn less money than eligibles although similar proportions of all students earned above $1,000, as shown in Table 6.2.

TABLE 6.1: IRS-REPORTED DEPENDENT STUDENT ADJUSTED GROSS INCOME BY BEOG-REPORTED INCOME RANGE FOR ALL ELIGIBLE DEPENDENT APPLICANTS

Dependent Student Income Range	BEOG-REPORTED INCOME RANGE									
	Total % of Column	Less Than $1,001 % of Column	$1,001 - $2,000 % of Column	$2,001 - $4,000 % of Column	$4,001 - $6,000 % of Column	$6,001 - $8,000 % of Column	$8,001 - $10,000 % of Column	$10,001 - $15,000 % of Column	$15,001 - $17,500 % of Column	$17,501 + Over % of Column
Less Than $1,000	56.9	63.1	61.8	57.8	57.6	56.3	54.8	52.7	51.3	50.0
$1,001 - $2,000	20.3	15.6	19.0	18.9	19.8	20.8	21.6	23.7	24.2	23.6
$2,001 - $3,000	11.1	9.4	8.5	11.3	10.3	10.7	11.7	12.4	13.6	14.7
$3,001 - $4,000	5.2	4.6	4.9	4.9	4.5	5.9	5.4	5.7	5.5	6.1
$4,001 - $5,000	2.9	2.9	2.5	3.2	3.3	2.8	3.2	2.6	2.3	3.1
$5,001 - $6,000	1.6	1.8	1.7	1.9	2.1	1.6	1.3	1.3	1.4	1.2
$6,001 - $7,000	.8	1.1	.7	.9	.9	.8	1.0	.8	.7	.5
$7,001 - $8,000	1.1	1.5	.9	1.2	1.0	1.2	1.1	.8	1.0	.8
	n = 105457	216802	36816	106760	133332	135199	132419	223060	54314	16841

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TABLE 6.2: IRS-REPORTED DEPENDENT STUDENT ADJUSTED GROSS INCOME BY BEOG-REPORTED INCOME RANGE FOR ALL DEPENDENT APPLICANTS, ELIGIBLE AND INELIGIBLE

Dependent Student Income Range	Total % of Column	Less Than $1,001 % of Column	$1,001 - $2,000 % of Column	$2,001 - $4,000 % of Column	$4,001 - $6,000 % of Column	$6,001 - $8,000 % of Column	$8,001 - $10,000 % of Column	$10,001 - $15,000 % of Column	$15,001 - $17,500 % of Column	$17,501 + Over % of Column
Less than $4,001	54.3	63.0	61.4	57.9	57.0	55.4	54.1	52.6	49.9	49.3
$1,001 - $2,000	22.4	15.6	19.3	19.0	20.0	21.1	22.1	23.6	26.0	26.8
$2,001 - $3,000	11.5	9.5	8.6	11.2	10.5	11.0	11.6	12.2	12.3	12.8
$3,001 - $4,000	5.6	4.6	4.8	4.8	5.0	6.0	5.4	5.9	6.5	5.2
$4,001 - $5,000	2.8	2.9	2.5	3.2	3.2	2.7	3.2	2.7	2.5	2.4
$5,000 - $6,000	1.5	1.7	1.6	1.8	2.1	1.6	1.3	1.4	1.6	1.2
$6,001 - $7,000	.9	1.1	.7	.8	1.0	.9	1.1	.8	.6	.9
Over $7,000	1.0	1.6	1.0	1.2	1.1	1.2	1.1	.8	.6	.8
	n= 1723554	n= 224038	n= 38872	n= 109303	n= 145074	n= 155116	n= 158754	n= 375100	n= 178575	n= 344718

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The analyses of student income by Student Eligibility Index indicated that as SEI increased, the percentage of students earning between $1,001 - $3,000 increased, and the proportion of those earning $1,000 or less decreased. While 64.2 percent of students with an SEI of 0 earned $1,000 or less, only 50.3 percent of ineligibles earned $1,000 or less. Twenty-two percent of all students earned between $1,001 - $2,000, as shown in Table 6.3, including 20.3 percent of eligibles and 25.7 percent of ineligibles. Among those with an SEI of 0, only 8.7 percent earned between $2,001 - $3,000, but for those with SEIs of 1 or above, between 11.5 and 15.2 percent earned that amount, with no consistent relationship to SEI level.

Other than the fact that those with SEIs of 0 more frequently earn under $1,000, and less frequently over $1,000, there are few consistent changes with respect to SEI level of all applicants. That is, as SEI increases, including ineligibles, the proportions of students in each income category do not change appreciably for those students with SEIs of 1 or more. This is in marked contrast to the income analysis which showed, for the most part, that as BEOG parental income rose, the proportions of students earning over $2,000 increased. Thus, it would appear that the calculation of student eligibility would remain fairly consistent with current assessments if dependent student income were added to the family income, and Basic Grant awards to dependents would change only moderately if their income were entered into the SEI calculation. This issue is discussed in detail later in this chapter.

We turn now to a discussion of the applicant resources reported on BEOG applications as compared to the income level of students. As income of students increased, so did the percentage of those saving (see Table 6.4). Moreover, as resource level increased, the percentage of those students earning $1,000 or less decreased dramatically. Yet, among eligibles, some 44.6 percent of those with savings of $2,001 or more earned less than $1,000, and 21.3 percent earned $1,001 - $2,000. Of course, with large amounts of resources, the need for students to seek employment is reduced. In the $1,001 - $2,000 IRS income range, the percentage of students having resources

TABLE 6.3: IRS-REPORTED DEPENDENT STUDENT ADJUSTED GROSS INCOME BY BEOG SEI RANGES FOR ALL DEPENDENT APPLICANTS, ELIGIBLE AND INELIGIBLE

Dependent Student Income Range	BEOG-REPORTED SEI										
	Total % of Column	All Eligibles % of Column	0 % of Column	1-100 % of Column	101-200 % of Column	201-400 % of Column	401-600 % of Column	601-800 % of Column	801-1000 % of Column	1001-1200 % of Column	All ineligibles 1201 & Over % of Column
Under $1,001	54.3	56.9	64.2	55.0	54.4	54.1	53.3	51.7	51.0	51.2	50.3
$1,001 - $2,000	22.4	20.3	15.9	20.7	20.8	21.4	22.5	23.8	24.6	24.3	25.7
$2,001 - $3,000	11.5	11.1	8.7	11.7	11.5	11.8	12.1	12.7	12.9	13.2	12.3
$3,001 - $4,000	5.6	5.2	4.5	5.8	5.3	5.6	5.2	5.8	5.7	6.0	6.0
$4,001 - $5,000	2.8	2.9	2.8	2.8	3.7	2.9	3.2	2.6	3.1	2.5	2.6
$5,001 - $6,000	1.5	1.6	1.7	1.7	1.7	1.9	1.5	1.5	1.4	1.4	1.3
$6,001 - $7,000	.9	.9	.9	.9	1.1	.8	1.0	.9	.7	.8	.9
Over $7,000	1.0	1.1	1.1	1.2	1.5	1.4	1.1	1.1	.7	.6	.8
	n= 1723554	n= 1050547	n= 363175	n= 116749	n= 61239	n= 109731	n= 107425	n= 106631	n= 100448	n= 85147	n= 673007

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TABLE 6.4: IRS-REPORTED DEPENDENT STUDENT INCOME BY BEOG-REPORTED APPLICANT RESOURCES FOR ALL ELIGIBLE DEPENDENT APPLICANTS

Dependent Student Income Range	BEOG-REPORTED APPLICANT RESOURCES									
	Total % of Column	0 % of Column	$1-100 % of Column	$101-300 % of Column	$301-500 % of Column	$501-700 % of Column	$701-1,000 & of Column	$1,001-1,500 % of Column	$1,501-2,000 % of Column	$2,001&Over % of Column
Under $1,000	56.9	61.6	55.2	47.4	43.2	42.6	43.3	38.3	33.3	44.6
$1,001 - $2,000	20.3	18.2	21.4	24.7	25.2	25.5	25.6	26.5	20.0	21.3
$2,001 - $3,000	11.1	9.5	11.7	14.3	15.5	15.6	16.5	16.3	16.2	16.3
$3,001 - $4,000	5.2	4.6	5.2	6.4	7.2	8.2	7.0	11.2	9.8	5.9
$4,001 - $5,000	2.9	2.6	3.0	3.2	4.5	3.5	2.9	4.2	9.6	8.3
$5,001 - $6,000	1.6	1.5	1.6	1.9	1.9	2.5	2.4	1.8	4.6	1.3
$6,001 - $7,000	.9	.8	.9	.9	1.1	.9	1.0	.6	2.6	1.1
Over $7,000	1.1	1.1	.9	1.2	1.5	1.2	1.2	1.1	3.9	1.1
	n= 1050547	n= 611192	n= 222151	n= 135158	n= 38835	n= 14975	n= 14437	n= 8109	n= 3550	n= 2135

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increased from 18.2 percent of those with no resources to 26.5 percent of those with resources of $1,001 - $1,500. This same pattern emerged for students with incomes in the $2,001 - $3,000 range and the over - $3,000 range.

An important consideration in the analysis of applicant resources in the discussion of dependent student income is the fact that, for the 1977-78 application year, one-third of the applicant's resources were used in the claculation of the expected family contribution (SEI), whereas none of the student's income was. Thus, if applicant resources do, in fact, have a negative effect on eligibility, the resources of eligible and ineligible students should be different with ineligible students having more resources available. Indeed, in analyzing all dependent applicants together, the text table below shows that, with ineligibles added, a somewhat higher proportion of students are found in each resource category for students earning $3,000 or less. Among those earning more than $3,000, the proportions of eligibles and ineligibles with resources are similar, although slightly less frequent as resources increase. This difference can be explained as follows. As discussed above, fewer ineligibles earn over $3,000, with higher applicant resources as a percentage of what income they do have, ineligibles' applicant resources do seem to affect their eligibility. The converse may also be true -- those who are found to be ineligible find it necessary to save greater portions of what earnings they do have because they cannot obtain BEOG eligibility.

ALL DEPENDENT ELIGIBLE AND INELIGIBLE APPLICANT RESOURCES AS REPORTED TO BEOG

Dependent Student Income	Total % Column	0 % Column	$1-$500 % Column	$501-$1000 % Column	$1001-$2000 % Column	Over $2000 % Column
Under $1,000	54.3	60.0	50.8	43.7	39.6	38.1
$1,001-$2,000	22.4	19.7	24.5	27.3	27.7	24.3
$2,001-$3,000	11.5	9.8	12.6	14.3	16.1	17.2
Over $3,000	11.7	10.4	12.1	14.6	16.5	20.3
	n =	n =	n =	n =	n =	n =
	1723534	839214	868673	91371	50723	35756

Looked at another way, for each student income category over $1,000, more than half of all applicants have reported resources to Basic Grants. For the most part, the resources are small, less than $500, but more than 10 percent of all students with earnings of over $1,000 had resources of $501 or more. Those in the over $3,000 earnings category more frequently save either nothing or more than $500 than those who earn $1,001 - $3,000. This would indicate that those who earn $1,001 - $3,000 work to support themselves through school and manage to save a little, while those who earn more either need all their money for family support or manage to save a substantial amount. These findings are summarized below.

ALL DEPENDENT ELIGIBLE AND INELIGIBLE APPLICANTS' RESOURCES AS REPORTED TO BEOG

Dependent Student Income	0 % of Row	$1-$500 % of Row	$501-$1,000 % of Row	$1,001-$2,000 % of Row	Over $2,000 % of Row	Total Number of Students
Under $1,000	53.8	38.4	4.3	2.1	1.5	936418
$1,001-$2,000	42.8	44.8	6.4	3.6	2.2	386308
$2,001-$3,000	41.5	44.6	6.6	4.1	3.1	198869
Over $3,000	45.0	41.2	7.2	4.9	4.1	201956

Comparisons of the Impact of Various Treatments of Dependent Student Income on the EI Computation Algorithm.

The above findings appear to indicate that a substantial portion of all dependent students, regardless of family income, reported earnings to IRS. These earnings may go unreported on Basic Grant applications since much of these earnings are not retained as applicant resources. However, a higher proportion than had been expected do save a substantial amount of their earnings. Because dependent student earnings are such a prevalent factor in the BEOG population, and because there are still differences between the way the income of dependent and independent students are treated, it is important to future policy initiatives to understand the ways in which the earnings and resources of dependent students would affect their

eligibility status if the rules regarding such income were to change. There are a number of ways to incorporate applicant earnings and resources into the calculation on SEIs. Using IRS-reported applicant adjusted gross income and applicant resources, parental income and other factors reported to Basic Grants on the individual's BEOG application, the impact of student earnings was evaluated in four different ways.

- Total family income

  Dependent student earned income is added to parental income to define a total family income. (Dependent student AGI and parents AGI - offsets).

- Income as applicant resource

  Dependent student income added to resources with taxes subtracted, and subjected to the one-third contribution stipulation. ((Dependent student AGI - taxes paid + resources)/3).

- Applicant income substituted for applicant resources

  Dependent student income is substituted for applicant resources. (Dependent student AGI - taxes paid).

- Net income "applicant resources"

  The portion of dependent student income to be treated as a resource is the difference between earned income and reported applicant resources. ((Dependent student AGI - taxes) - resources) + resources, where result of subtraction is greater than zero).

The analysis of these models has utilized the comparison of new SEIs calculated on the basis of incorporating the above treatments of dependent applicant incomes in the SEI computation algorithm with the SEIs of record. We will look at the changes as a function of both BEOG-reported parental income and SEIs of record. Discussion of these analyses follows.

Total Family Income

For this model, 55.8 percent of the SEIs would change by less than 50 points. As shown in the text table below, the changes differed significantly according to BEOG-reported parental income. For

example, among those whose BEOG-reported income range was $1,000 or less, 77.9 percent would experience little or no SEI change if this model were adopted. Similarly, 74 percent of those in the $1,001 - $4,000 BEOG reported range would experience no or very little change. However, for those whose parents reported $4,001 or more income to BEOG, only about half (51.6 percent) would have SEIs remain the same, with those reporting $10,001 or more having a 63.3 percent incidence of significant change. Most changes would be on the order

EFFECT OF TOTAL FAMILY INCOME MODEL ON BEOGS DEI BY BEOG-REPORTED INCOME

Change in SEI	Total % Column	Under $1001 % Column	$1,001-$4,000 % Column	$4,001-$10,000 % Column	Over $10,000 % Column
No change (within 50 pts.)	55.8	77.9	74.2	51.6	36.7
Moderate change (51-400 pts.)	28.7	13.5	14.9	31.8	42.1
Large change (400 or more pts.)	15.4	8.6	10.9	16.6	22.2
	n =	n =	n =	n =	n =
	1050547	216802	138576	400950	294215

of 200-400 SEI points. Among students whose parents' BEOG-reported income was over $10,000, 10 percent of the SEI changes would be between 401-600 points. Of the more than one million applicants in the data base, it is estimated that only 90 would experience a decreased SEI based on this model.

If we look at the Total Family Income Model's effect relative to SEIs of records for the population, a similar pattern emerges. Nearly 12 percent of the applicants would recieve an SEI greater than 1200 (ineligible), with most of these coming among those with higher SEIs of record. This might be expected, since only a minor change would make those in the 1001-1200 point category ineligible. However, it is interesting to note that among those whose SEI of record is zero, 82.3 percent would experience no change or insignificant changes, while less than one-third of

those in the 1001-1200 range would experience insignificant change. The SEI results are summarized below.

EFFECT OF TOTAL FAMILY INCOME MODEL ON BEOG SEI BY SEI OF RECORD:

Change in SEI	Total % Column	0 pts. % Column	1-400 pts. % Column	401-800 pts. % Column	800-1200 pts. % Column
No change(within 50 pts)	55.8	82.3	49.5	36.9	33.6
Moderate change (51-400 pts.)	28.7	11.5	33.4	40.5	34.8
Large change (401 or more pts.)	15.5	6.2	17.1	22.7	31.6
	n = 1050547	363175	287719	214056	185595
New SEI > 1200	n = 125150	2210	7983	26642	88407
	11.9%	.01%	.03%	12.4%	47.6%

As for income, those with the highest SEIs would experience the greatest changes in SEI under this model. For example, while small percentages of students in the zero SEI of record category (less than 2 percent) would experience changes of either 601-800 or 801 and over, some 6.8 percent and 8.0 percent, respectively, of those in the 1001-1200 category would experience such large jumps in SEI. Thus, the Total Family Income Model would have its greatest impact on higher income/higher SEI families, with most changes in the 201-400 Point range.

Income as Applicant Resource

The Income as Applicant Resource Model shows a significant change for the lower income applicants: more would experience SEI change than under the Family Income Model. Under the Income as Applicant Resource Model only 45.7 percent of the students whose parents' income was reported to be under $1,001 would not have a change in SEI.[1/] It is noteworthy that, overall, 17.2

[1/] One reason that the Total Family Income Model may not result in as many changes as other models may be that some applicants' family income as currently reported to BEOG may be negative in the under $1,001 parental income range.

percent of the filers would have changes greater than 800 points (compared to less than 5 percent in the previous model). Of the students in the under $1,001 BEOG-reported income category, 16.5 percent would have changes this great.

A distinguishing feature of the Income as Applicant Resource Model is that size of SEI change remains constant across income categories. Even where there is an increase that is related to income, the increase from the lowest income ranges to the highest is less than 3 percentage points. The one exception to such consistency is among those applicants who would experience little or no SEI change. Of the applicants in the lowest income category, under $1,001, 46.4 percent would experience an SEI change of less than 50 points. For higher income bracket applicants, the percentage experiencing less than a 50 point change falls to 34.2 percent for those in the $10,001 to $15,000 category and to 32.2 for those in the over $17,500 category, as shown below.

EFFECT OF INCOME AS APPLICANT RESOURCE MODEL ON BEOG SEI BY BEOG REPORTED INCOME RANGES

Change in SEI	Total % Column	Under $1001 % Column	$1,001-$4,000 % Column	$4,001-$10,000 % Column	Over $10,000 % Column
No change (± 50 pts.)	39.0	46.4	41.1	38.1	33.8
Moderate change (51-400 pts.)	23.3	21.0	22.6	23.9	24.6
Large change (400 or more pts.)	37.7	32.5	36.3	38.0	41.6

Under this model, 21.7 percent of the eligible applicants would become ineligible. The proportions entering the ineligible categories is greatest for those with higher SEIs of record, as shown in the text table below. This higher rate of ineligibility occurs because this model tends to add more points for all applicants than did the previous model. The Income as Applicant Resource Model tends to

result in SEI changes that are fairly equivalent across both BEOG-reported income and SEI of record levels, although those with lower incomes and SEIs tend to have fewer changes than those in higher categories.

EFFECT OF INCOME AS APPLICANT RESOURCE MODEL ON BEOG SEI BY SEI OF RECORD

Change in SEI	Total % column	0 pts. % column	1-400 pts. % column	400-800 pts. % column	800-1200 pts. % column
No change (within 50 pts)	39.0	47.1	36.8	34.2	32.0
Moderate change (5;-400 pts)	23.3	19.5	23.5	24.2	25.7
Large change (400 or more pts.)	37.7	31.3	39.7	41.1	42.5
New SEI > 1200	21.7	7.3	11.5	28.6	57.8

Applicant Income Substituted for Applicant Resources

Two major differences are immediately apparent in comparing the Applicant Incomes Substitution Model with the previous two models. First, fewer applicants would be in the no-change category; overall 31.1 percent would have no changes. Second, a significant number of applicants would find their SEIs decreased; 9.1 percent of applicants would have a decrease in SEI if this model were adopted. This model is also relatively free of differential effects due to parental BEOG-reported income, having less variation than the Income as Applicant Resource Model, as shown below. In the

EFFECT OF APPLICANT INCOME SUBSTITUTED FOR APPLICANT RESOURCES MODEL ON BEOG SEI BY BEOG-REPORTED INCOME RANGES

Change in SEI	Total % column	Under $1,000 % column	$1,001-$4,000 % column	$4,001-$10,000 % column	Over $10,000 % column
No change (within 50 pts)	31.1	39.8	32.7	29.9	25.9
Moderate change (51-400 pts)	24.0	21.5	19.3	24.6	25.6
Large change (400 or more pts)	35.7	31.1	34.0	36.0	39.4
SEI Decrease	9.11	7.67	10.0	9.6	9.1

SEI of record analysis, however, somewhat wider ranges, particularly in the no change category were noted. As shown in the following text table, under the Applicant Income Substitution Model, 47.1 percent of applicants with zero SEI would experience no or little SEI change, but only 20.2 percent of those in the 1001-1200 point SEI of record category would remain substantially the same. The proportions of those becoming ineligible as a result of the substitution model are essentially similar to those of the Income as Applicant Resource Model.

EFFECT OF APPLICANT INCOME SUBSTITUTED FOR APPLICANT RESOURCES MODEL ON BEOG SEI BY SEI OF RECORD

Change in SEI	Total % column	0 pts. % column	1-400 pts. % column	400-800 pts. % column	800-1200 pts. % column
No change (within 50 pts)	31.1	47.1	22.0	24.9	21.5
Moderate change (51-400 pts)	24.0	21.6	24.4	25.2	27.1
Large change (400 or more pts)	35.7	31.3	37.3	38.6	38.4
SEI Decrease	9.1	0.0	16.4	11.3	13.0
New SEI > 1200	20.2	7.2	10.5	26.1	54.0

Net Income Applicant Resources Model

The Net Applicant Resources Model would result in far fewer SEI changes than any other model, as shown in the text table below. Indeed, less than 5 percent overall would change. Because the amount of change is so small, there would be no differential by BEOG-reported income. For SEIs of record, there would be an increase in the number of changes as SEI increases, with about 14 percent of those in the 1001-1200 point category changing. But only 7 percent of the individuals in this category would become ineligible as a result of this model. Fewer than one percent of all applicants would become ineligible.

EFFECT OF NET INCOME MODEL ON BEOG SEI BY SEI OF RECORD

Change in SEI	Total % column	0 pts. % column	1-400 pts. % column	401-800 pts. % column	800-1200 pts. % column
No change (within 50 pts)	95.3	100.0	90.2	93.5	92.1
Moderate change (51-400 pts)	4.4	.0	5.9	5.6	7.0
Large change (400 or more pts)	.3	.0	.0	.7	.9
SEI > 1200	.17	.0	.0	.2	3.9

Discussion, Conclusions and Recommendations

The preceding data have indicated that a substantial number of dependent eligible students reported incomes to IRS. It was originally hypothesized that, although some of this money is considered in the determination of Basic Grant eligibility through "applicant resources," it may be only a small percentage of the money dependent eligibles will have at their disposal during the application year because not all of the "income" becomes an "applicant resource." However, it was found that dependent students who earn money themselves do, in fact, save a sizeable portion of their incomes. It was further shown that the proportions of dependent students reporting earned income to IRS are distributed fairly evenly across BEOG-reported parent income ranges, with some tendency for those in higher ranges to earn more money. The vast majority of all students, however, earned $3,000 or less. Those earning more than $3,000 were not significantly different among BEOG-reported parental income ranges. Finally, the application of the four models for determining student income contribution to the SEI resulted in widely differing impact upon award distribution.

These four models investigated different treatments of student earned income by itself and in relationship to applicant resources currently reported to Basic Grants.

The Total Family Income Model assumed that student income is a portion of family financial strength as it is, with all the offsets attributed to this sum as it is to the parents' income. The Income as Applicant Resource Model treated student earnings as if they were applicant resources (and added the earning minus taxes) to already reported resources. Both of these models potentially double count the same money -- income and whatever portion of that income is retained as resources -- plus other sources of savings. The Income Substitution Model eliminated current applicant resources and used dependent student income in their place. Finally, the Net Income Model added only that income greater than existing resources to the reported resources. All other things being equal, the Total Family Income concept would realize the greatest offsets to the income in terms of allowances for family expenses and expenses connected with work, but would still not avoid the question of double counting. The Income as Applicant Resource Model also entails possible double counting, but alleviates some of the impact of the size of dependent applicant income by enabling the applicant to attribute only one-third of it to education expenses.

The Income Substitution Model avoids double counting altogether by eliminating resources from the calculations; however, it also eliminates an important characteristic of dependent student assets from the calculation. The Net Income Model goes the furthest in avoiding double counting, but it would appear from these analyses that the size of student resources and student earnings (minus taxes) when they exist, are often of similar magnitude, indicating that students do have significant resources. Thus, the Net Income Substitution Model which subtracts resources from income, results in very few changes because resources and income are so close in size. Indeed. the Income Substitution Model resulted in a 9 percent rate of reduction in SEI, indicating that, for these students, and for the 31.1 percent who would experience no change under this model, savings were equal to or greater than their income with taxes subtracted.

Let us take a closer look at comparisons among the models as applied to this data base. Tables 6.5 and 6.6 summarize the results of the model simulation on income and Student Eligibility indices, respectively. Overall, the fewest changes occur in the Net Income Substitution Model. The changes that do occur are relatively stable across parental income categories. Greater changes to SEIs do occur for students with higher SEIs of record, with 3.9 percent becoming ineligible. The Total Family Income Model resulted in a moderate amount of change overall, but substantially less change for students whose BEOG-reported family income was less than $1,001. Here, 77.9 percent of the applicants would experience little or no change to their SEIs. This result is not necessarily a function of the low levels of earnings of these students since 36.9 percent of these students earned more than $1,000 in the year analyzed. It may reflect a high number of negative incomes reported to BEOG by parents. As a result, even a relatively large sum of student earnings may not be able to raise Total Family Income above the $1,000 level of family earnings, thus showing no change in SEI. At the same time, this model reflected the highest frequency of moderate (51-400 points) change for high income applicants. An estimated 42.1 percent of those whose BEOG-reported parental income was greater than $10,000 would experience a moderate change under this model as contrasted to the Income as Applicant Resource and Income Substitution Models where this change would occur for only one-fourth of applicants. These latter models, however, would result in more large (greater than 400 points) changes for upper income students with 42.5 and 38.4 percent rates of large changes, respectively. Under all three of these models, 47.6 percent, or more of the students in upper BEOG-reported incomes would become ineligible as a result of these models.

The Total Family Income Model resulted in fewer changes to the overall BEOG population than had been expected; and was quite sensitive to differences in BEOG-reported parental incomes. (Presumably, if all students earned the same, SEIs should change across the board with few variations in the size of SEI change that could be related to income.) By the same token, the Income as Applicant

TABLE 6.5: COMPARATIVE PROPORTIONS OF CHANGES IN SEI CAUSED BY SUBSTITUTION OF THE FOUR DEPENDENT STUDENT INCOME MODELS TO THE 1977-1978 BEOG APPLICATION DATA FILE FOR ALL ELIGIBLES AND BY INCOME LEVEL OF FILERS

CHANGES IN SEI ALL ELIGIBLE FILERS	Total Family Income % of Column	Income As Applicant Resource % of Column	Income Substituted For Applicant Resources % of Column	Net Income % of Column
No Change (within 50 pts.)	55.8	39.0	31.1	95.3
Moderate Change (51-400 pts.)	28.7	23.3	24.0	4.4
Large Change (401 pts. and over)	15.4	37.7	35.7	0.3
Decrease in SEI	-	-	9.1	-
New SEI > 1200 pts.	11.9	21.7	20.2	0.7
LOW INCOME ELIGIBLE FILERS: BEOG-REPORTED INCOME UNDER $1,001				
No Change (within 50 pts.)	77.9	46.4	39.8	96.2
Moderate Change (51-400 pts.)	13.5	21.0	21.5	3.3
Large Change (401 pts. and over)	8.6	32.5	31.1	.4
Decrease in SEI	-	-	7.7	-
New SEI > 1200 pts.	.01	7.3	7.2	-
HIGH INCOME FILERS: BEOG-REPORTED INCOME OVER $10,000				
No Change (within 50 pts.)	36.7	33.8	25.9	95.5
Moderate Change (51-400 pts.)	42.1	24.6	25.6	4.2
Large Change (401 pts. and over)	22.2	41.6	39.4	.1
Decrease in SEI	-	-	9.1	.9
New SEI > 1200 pts.	47.6	57.8	54.0	3.9

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TABLE 6.6: COMPARATIVE PROPORTIONS OF CHANGES IN SEI CAUSED BY SUBSTITUTION OF THE FOUR DEPENDENT STUDENT MODELS TO THE 1977-1978 BEOG APPLICATION DATA FILE FOR ALL ELIGIBLES AND BY SEI OF RECORD

CHANGES IN SEI ALL ELIGIBLE FILERS	Total Family Income % of Column	Income As Applicant Resource % of Column	Income Substituted For Applicant Resources % of Column	Net Income % of Column
No Change (within 50 pts.)	55.8	39.0	31.1	95.3
Moderate Change (51-400 pts.)	28.7	23.3	24.0	4.4
Large Change (401 pts. and over)	15.4	37.7	35.7	0.3
Decrease in SEI	-	-	9.1	-
New SEI > 1200 pts.	11.9	21.7	20.2	0.7
SEI OF RECORD = 0				
No Change (within 50 pts.)	82.3	47.1	47.1	100.0
Moderate Change (51-400 pts.)	11.5	19.5	21.6	-
Large Change (401 pts. or more)	6.2	31.3	31.3	-
Decrease in SEI	-	-	-	-
New SEI > 1200 pts.	.01	7.3	7.2	-
SEI OF RECORD > 800 POINTS				
No Change (within 50 pts.)	33.6	32.0	21.5	92.9
Moderate Change (51-400 pts.)	34.8	25.7	27.1	7.0
Large Change (401 pts. or more)	31.5	42.5	38.4	.9
Decrease in SEI	-	-	13.0	-
New SEI > 1200 pts.	47.6	57.8	54.0	3.9

Resource Model was expected to have a smaller effect on BEOG eligibility and to be more sensitive than the Total Family Income to variations in BEOG-reported parental income. In fact, the Income as Applicant Resource Model resulted in many more changes to SEI level than the Total Family Income Model, and was more equitably distributed across income levels. It also resulted in a larger number of applicants becoming ineligible.

The major disadvantages of proposals combining resources and income are: 1) they expand the application reporting requirements; 2) validation of the percentage of student assets attributable to earnings in the previous tax year would be virtually impossible; and 3) they beg the question of year-to-year variation in earned incomes for dependent students. This latter problem is particularly serious because, if dependent student income is subjected to the 33 percent resource contribution rule, a difference of a $1,000 earned income between the previous tax year and the year of application could result in a large decrease in the size of a BEOG award for the student, if the difference is in favor of the tax year income. Perhaps the only solution to this problem is to ask the dependent student to estimate his anticipated application year earnings. This would, of course, create additional quality assurance problems.

Any decision to change the Basic Grant treatment of dependent applicant earned income would necessarily depend on further analysis of how treatment of independent students' financial status under the new regulations affects the distributions of inequities between dependents and independents, and upon review of the application of the models in the analysis above. Given the results of the present study, the issues in decision making become:

- Who should be most affected by the change, high or low-income applicants, or should the change be equitable across BEOG-reported categories?
- Should students who earn more be penalized more, or should those who save more?
- Which model or combinations of regulations seem to eliminate differences between dependents and independents?

- Which model or combination of features would minimize reporting difficulties and present the fewest processing and quality assurance problems?

Whether dependent student income is of concern to the Bureau of Student Financial Assistance is a matter of policy and regulatory priorities. Even with some recent changes to the treatment of independent student earnings, the current policy regarding dependent student income would appear to work to the advantage of dependent students at the expense of those who apply for grants as independent students.

It is, of course, one thing to point out a potential problem and quite another thing to recommend solutions. Of the several options that might be considered with respect to dependent student income, each has its own particular limitations that may result in inequities comparable to those of the present system. Perhaps the most difficult aspect of this issue is the fact that student earnings (unlike parental earnings) can be quite variable from year to year. To calculate Basic Grant eligibility on the basis of income earned during the previous tax year is acceptable for parent income and independent student income because, if circumstances alter dramatically during the year of Basic Grant application, students have the opportunity to submit supplemental applications. However, there is no comparable mechanism to take into account significant variation in the earned incomes of dependent students.

As was done in the present study, dependent student income could be pooled with parental income to create a "total family income" figure. This would allow dependent students the recourse of supplemental applications if, for some reason, their anticipated earnings during the year of application are substantially below the preceding year for which income data are available. For example, if total family income is $12,000, $3,000 of which is the dependent student's income, then the loss of that $3,000 during the year of application could reasonably be considered as a substantial change in the family's total income situation.

However, it would seem inappropriate to subject the dependent student's income to the same offsets as parental income which is what occurs given the existing award calculation process. Only in severe circumstances could it be anticipated that a dependent student's income would be applied to the maintenance of household to the same degree as parental income. To provide for a separate consideration of dependent student income with its own special set of offsets would only serve to complicate the application process and further complication of this process should be avoided if at all possible.

A more equitable arrangement would appear to be to treat dependent student earned income in the same way in which applicant resources are now considered. However, to avoid the "double jeopardy" problem discussed on page 6.1, the applicant should be asked to stipulate the approximate percentage of his savings/checking account balance attributable to his previous year's taxable income. Net applicant resources to be included in the calculation of Basic Grant eligibility would be the total of the applicant's earned income plus the balance of other assets not derived from income earned the previous tax year.

However, such estimates may be quite difficult for individuals to report accurately, and even more difficult to validate or subject to BEOG quality control procedures. Because we currently have no information allowing us to estimate the proportion of student assets that could be attributable to their income, this analysis examined several different ways of varying the treatment of earned income and applicant resources. The Net Income Model which added that portion of income in excess of the amount of resources, resulted in few changes to the dependent applicant population. The remaining two models, the Income as Applicant Resource Model and the Income Substitution Model, resulted in increases in SEI for 60 percent of the applicants, and were essentially similar to one another, except that the Substitution Model would have caused a 9.1 percent rate of decrease in SEI.

The assumptions underlying the treatment of student income must be carefully considered along with the impact across different types of students. Issues that are raised include whether these models represent "true" definitions of resources and income -- that is, are the results of the models a true indication of student income impact and a true picture of how resources are used by students, or are the results merely a statistical manipulation? Another issue is the one frequently implied in earlier discussions -- how are student income and resources used: as family income, to help pay for education or living expenses while in school or as extra spending money for students whose parents (and financial aid) cover other expenses? Finally, serious consideration must be given to two issues of equity within BEOG policy formulation -- that of the impact of each model on students with differing amounts in family and self-developed financial capabilities; and that of the establishment of equity between dependent and independent applicant treatment in the calculation of BEOG eligibility.

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APPENDIX A

PROPORTION OF 1976-77 BASIC GRANT APPLICANTS WHOSE IRS DATA WERE EXACTLY EQUAL TO BEOG-REPORTED DATA

TABLE A.1: PROPORTION OF ELIGIBLE BASIC GRANT APPLICANTS WHOSE IRS DATA WAS EXACTLY EQUAL TO BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME LEVELS

Data Element	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
Adjusted Gross Income	20.9	9.0	5.3	6.3	13.2	26.8	35.2	34.5	67.6	66.1
Federal Income Taxes	51.4	67.8	62.5	56.6	44.8	43.2	45.1	49.3	49.9	49.7
IRS-based SEI1/	47.3	55.5	45.0	66.1	55.5	34.5	30.5	32.1	46.1	45.6

1/ Figures in this row reflect the proportion of applicants whose IRS-based SEI was exactly equal to the BEOG SEI of record (AGI and tax substitution only)

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TABLE A.2: PROPORTION OF INELIGIBLE BASIC GRANT APPLICANTS WHOSE IRS DATA WAS EXACTLY EQUAL TO BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME LEVELS

Data Element	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
Adjusted Gross Income	53.3	10.9	7.1	5.9	15.6	32.8	44.1	45.6	75.6	75.4
Federal Income Taxes	57.5	73.1	74.7	57.6	50.2	51.9	55.6	58.9	57.4	59.7
IRS-based SEI[1]	40.1	9.0	12.8	8.8	13.3	24.5	32.7	36.9	53.5	55.9

[1] Figures in this row reflect the proportion of applicants whose IRS-based SEI was exactly equal to the BEOG SEI of record (AGE and tax substitution only)

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APPENDIX B

SUPPLEMENTAL APPLICANT TABLES

TABLE B.1: DISCREPANCIES IN BEOG-REPORTED ESTIMATED ADJUSTED GROSS INCOME, BY ELIGIBILITY AND DEPENDENCY STATUS - SUPPLEMENTAL APPLICANTS

Discrepancies in Adjusted Gross Income	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS/BEOG: $5001+	10.8	20.2	5.3	13.1	21.3	6.3	8.0	18.7	4.0
IRS/BEOG: $2001-5000	24.2	24.2	24.2	23.5	24.8	22.3	24.9	23.4	25.5
IRS/BEOG: $1001-2000	16.2	15.0	17.0	17.5	13.5	20.9	14.9	13.9	15.5
IRS/BEOG: $1-1000	21.5	16.0	25.4	25.1	17.9	31.0	23.9	15.2	28.3
0	3.2	2.1	4.0	2.9	2.1	3.5	3.6	2.1	4.2
BEOG/IRS: $1-1000	8.0	6.0	8.8	8.3	6.6	9.8	7.7	6.6	8.2
BEOG/IRS: $1001-2000	5.5	4.7	2.8	3.7	4.6	3.0	5.5	4.9	2.6
BEOG/IRS: $2001-5000	7.5	7.7	7.0	4.8	7.0	2.9	9.5	8.6	9.9
BEOG/IRS: $5001+	2.4	4.8	.96	1.1	2.1	2.6	3.6	3.8	1.2
	100.0 (N=113,932)	100.0 (N=52,950)	100.0 (N=61,145)	100.0 (N=68,735)	100.0 (N=31,277)	100.0 (N=37,470)	100.0 (N=75,368)	100.0 (N=21,660)	100.0 (N=53,719)

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TABLE B.2: DISCREPANCIES IN BEOG-REPORTED ESTIMATED ADJUSTED GROSS INCOME, BY BEOG-REPORTED INCOME RANGES - ALL SUPPLEMENTAL APPLICANTS

Discrepancies in Adjusted Gross Income	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
BEOG>IRS: $5001+	10.8	12.8	8.2	5.6	10.9	16.3	17.1	16.9	18.0	14.2
BEOG>IRS: $2001-5000	21.2	26.8	18.5	27.0	21.4	22.3	23.3	23.2	27.4	21.8
BEOG>IRS: $1001-2000	16.1	21.1	20.7	16.0	15.3	12.9	13.7	15.2	12.6	12.6
BEOG>IRS: $1-1000	24.5	30.6	36.7	28.1	21.7	18.3	17.2	13.8	10.5	12.6
BEOG=IRS: $0	3.2	4.8	3.0	3.7	3.8	2.8	1.6	1.9	2.8	2.8
BEOG<IRS: $1-1000	7.9	3.8	10.8	8.8	9.7	7.2	6.8	6.2	4.3	7.7
BEOG<IRS: $1001-2000	3.6	0.0	2.1	2.3	6.4	5.0	5.6	5.8	5.0	1.2
BEOG<IRS: $2001-5000	7.3	0.0	0.0	8.3	10.9	10.4	7.9	8.2	8.7	7.5
BEOG<IRS: $5001+	2.4	0.0	0.0	0.0	.8	4.5	7.1	6.8	9.0	16.3
	100.0 (N=145,932)	100.0 (N=17,458)	100.0 (N=11,719)	100.0 (N=18,140)	100.0 (N=24,525)	100.0 (N=16,966)	100.0 (N=9,602)	100.0 (N=6,268)	100.0 (N=4,022)	100.0 (N=5,552)

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TABLE B.3: DISCREPANCIES IN BEOG-REPORTED ESTIMATED ADJUSTED GROSS INCOME, BY BEOG-REPORTED INCOME RANGES - ELIGIBLE SUPPLEMENTAL APPLICANTS

		BEOG Reported Adjusted Gross Income								
Discrepancies in Adjusted Gross Income	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
5001+	13.1	12.6	8.8	9.8	14.0	18.2	18.5	18.9	19.2	12.0
2001 5000	23.5	26.8	18.9	22.5	21.4	21.0	25.0	26.3	29.4	26.9
1001 2000	17.5	21.6	21.5	16.8	15.1	13.8	13.2	17.1	13.5	11.6
1 1000	25.0	30.3	36.0	26.7	20.7	16.9	15.3	13.2	9.7	0.0
0	2.9	4.6	2.4	2.8	2.6	2.0	2.0	1.8	1.5	0.0
1 1000	8.3	3.9	10.5	12.2	9.4	7.8	5.3	4.0	2.0	0.0
1001 2000	3.7	0.0	2.0	5.6	6.0	4.8	4.7	4.3	7.1	0.0
2001 5000	4.7	0.0	0.0	3.7	10.0	9.0	5.2	6.6	4.7	0.0
5001+	1.1	0.0	0.0	0.0	.7	3.4	4.5	6.3	4.4	10.5
	100.0 (N=68,735)	100.0 (N=15,298)	100.0 (N=9,798)	100.0 (N=13,469)	100.0 (N=14,321)	100.0 (N=8,789)	100.0 (N=4,258)	100.0 (N=2,022)	100.0 (N=596)	100.0 (N=198)

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TABLE B.4: DISCREPANCIES IN BEOG-REPORTED ESTIMATED ADJUSTED GROSS INCOME, BY BEOG-REPORTED INCOME RANGES - INELIGIBLE SUPPLEMENTAL APPLICANTS

Discrepancies in Adjusted Gross Income	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
5001+	8.6	14.3	5.6	4.0	6.1	14.3	15.9	15.9	17.8	14.2
2001 5000	21.6	26.2	16.8	28.7	21.5	20.4	19.6	21.8	27.1	21.5
1001 2000	14.9	17.6	16.6	15.8	15.6	12.0	14.2	14.2	13.7	12.6
1 1000	24.0	33.2	40.7	26.6	23.1	19.9	18.3	14.0	9.5	12.8
0	3.6	5.7	6.2	4.0	3.1	3.7	1.5	2.1	3.2	5.0
1 1000	7.7	2.5	11.8	7.6	9.9	7.1	7.6	6.6	4.4	7.3
1001 2000	3.5	0.0	2.1	1.0	7.1	5.1	6.2	6.4	4.6	4.2
2001 5000	9.6	0.0	0.0	10.1	12.0	11.8	7.5	8.9	9.1	7.5
5001+	5.6	0.0	0.0	0.0	1.1	5.8	9.2	10.0	9.8	16.5
	100.0 (N=75,368)	100.0 (N=2,140)	100.0 (N=1,921)	100.0 (N=34,971)	100.0 (N=10,002)	100.0 (N=8,178)	100.0 (N=5,314)	100.0 (N=4,207)	100.0 (N=3,425)	100.0 (N=5,151)

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B.5: DISCREPANCIES IN BEOG-REPORTED ESTIMATED FEDERAL INCOME TAXES, BY ELIGIBILITY AND DEPENDENCY STATUS - SUPPLEMENTAL APPLICANTS

Discrepancies in Taxes Paid	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
Overstated: 2001+	1.5	3.7	.24	1.5	2.9	.21	1.5	4.7	.25
1001-2000	5.1	9.9	2.3	4.6	8.5	1.3	5.6	11.9	2.9
501-1000	8.5	14.3	5.2	8.4	12.6	4.8	8.7	16.7	5.5
1-500	38.5	29.8	43.6	30.0	30.9	29.3	46.2	28.1	55.5
0	25.5	20.4	28.4	42.0	28.9	52.9	10.4	8.2	11.3
Understated: 1-500	17.1	15.1	18.3	11.8	13.3	10.7	21.9	17.7	23.6
501-1000	2.4	3.9	1.5	1.4	2.3	.67	3.3	6.4	2.1
1001-2000	1.0	2.0	.43	.31	.59	.07	1.7	4.1	.68
2001+	.58	.86	.10	.02	.05	0.0	.69	2.0	.16
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=143,672)	(N=52,845)	(N=90,976)	(N=68,526)	(N=31,201)	(N=37,336)	(N=75,317)	(N=21,644)	(N=53,684)

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TABLE B.6: DISCREPANCIES IN BEOG-REPORTED ESTIMATED FEDERAL INCOME TAXES, BY BEOG-REPORTED INCOME RANGES - ALL SUPPLEMENTAL APPLICANTS

Discrepancies in Taxes Paid	Total	BEOG Reported Adjusted Gross Income: Less than 1,000	1,000 1,999	2,000 3,999	4,000 6,999	7,000 9,999	10,000 12,499	12,500 14,999	15,000 17,499	17,000 or more
	%	%	%	%	%	%	%	%	%	%
2001+	1.5	.7	.6	.1	1.3	2.1	4.2	3.2	5.0	7.7
1001 2000	5.1	1.5	1.4	3.0	3.6	8.4	10.7	14.3	17.2	9.6
501 1000	8.6	2.8	3.6	6.4	9.9	15.5	15.3	18.8	16.9	16.7
1 500	38.4	18.0	25.1	56.5	38.2	32.2	32.3	29.2	27.3	22.7
0	25.5	76.3	65.3	20.0	10.2	7.6	2.9	1.7	.9	.2
1 500	17.0	.3	4.4	15.9	26.8	28.1	25.4	18.6	16.3	17.6
501 1000	2.4	0.0	0.0	0.0	1.7	5.4	8.7	9.3	8.1	7.3
1001 2000	1.1	0.0	0.0	0.0	.2	.8	2.4	4.6	7.6	9.2
2001+	.4	0.0	0.0	0.0	0.0	0.0	0.0	.4	.6	9.0
	100.0 (N=183,672)	100.0 (N=17,351)	100.0 (N=11,452)	100.0 (N=40,302)	100.0 (N=24,266)	100.0 (N=16,959)	100.0 (N=9,596)	100.0 (N=6,268)	100.0 (N=6,022)	100.0 (N=5,557)

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TABLE B.7: DISCREPANCIES IN BEOG-REPORTED ESTIMATED FEDERAL INCOME TAXES, BY BEOG-REPORTED INCOME RANGES - ELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

Discrepancies in Taxes Paid	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
Paid More: 2001+	1.5	.8	.4	.3	1.7	2.7	3.6	5.0	10.1	0.0
1001 2000	4.5	1.3	1.5	2.1	4.9	10.7	11.0	14.1	7.1	10.2
501 1000	8.3	3.9	3.8	5.2	10.1	16.0	18.1	21.3	20.0	15.6
1 500	29.9	17.5	25.4	35.8	36.9	33.8	35.8	32.7	29.2	5.1
0	32.0	37.0	64.7	47.6	23.7	8.6	4.0	1.6	2.0	0.0
Paid Less: 1 500	11.8	9.4	1.0	8.5	21.8	24.0	20.1	15.8	19.1	5.0
501 1000	1.1	0.0	0.0	0.0	1.0	3.7	5.8	8.7	8.5	8.2
1001 2000	.4	0.0	0.0	0.0	0.1	0.4	1.4	2.3	3.0	9.1
2001+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	100.0 (N=68,526)	100.0 (N=15,252)	100.0 (N=7411)	100.0 (N=13,423)	100.0 (N=16,285)	100.0 (N=8,785)	100.0 (N=4,258)	100.0 (N=2,022)	100.0 (N=596)	100.0 (N=198)

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TABLE B.8: DISCREPANCIES IN BEOG-REPORTED ESTIMATED FEDERAL INCOME TAXES BY BEOG-REPORTED INCOME RANGES - INELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

Discrepancies in Taxes Paid	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
2001+ (BEOG>IRS)	1.5	0.0	0.0	0.0	0.6	1.4	4.6	3.1	4.1	7.8
1001 2000 (BEOG>IRS)	5.5	2.6	.9	3.2	1.7	5.8	10.5	14.4	18.9	9.5
501 1000 (BEOG>IRS)	5.6	2.4	2.4	4.0	9.5	15.0	13.1	17.5	10.4	10.7
1 500 (BEOG>IRS)	4.6	22.4	22.5	04.3	40.3	30.6	29.5	27.7	27.1	22.8
0	10.4	71.8	68.1	9.4	10.4	0.0	1.9	1.8	.7	0.0
1 500 (IRS>BEOG)	21.9	0.8	- 5.0	18.8	34.3	32.5	20.4	19.9	16.1	17.5
501 1000 (IRS>BEOG)	3.3	0.0	0.0	0.0	2.8	7.2	10.8	9.7	7.9	7.2
1001 2000 (IRS>BEOG)	1.6	0.0	0.0	0.0	0.0	1.2	5.2	5.2	8.4	9.1
2001+ (IRS>BEOG)	.7	0.0	0.0	0.0	0.0	0.0	0.0	.5	.7	9.4
	100.0 (N=75,317)	100.0 (N=2,120)	100.0 (N=1,911)	100.0 (N=34,960)	100.0 (N=10,000)	100.0 (N=8,175)	100.0 (N=5,340)	100.0 (N=4,267)	100.0 (N=3,425)	100.0 (N=5,134)

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TABLE B.9: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE, BY ELIGIBILITY AND DISCREPANCY STATUS - SUPPLEMENTAL APPLICANTS

Discrepancies in Household Size	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
UNDERREPORTED 4+	.12	.18	.07	.18	.22	.12	.06	.12	.03
3	.07	.11	.05	.12	.11	.10	.02	.07	0.0
2	.34	.38	.35	.50	.51	.47	.21	.14	.27
1	4.04	4.3	3.9	5.9	6.1	5.6	4.1	4.5	3.9
0	80.2	67.4	88.4	73.6	73.9	81.7	87.1	72.4	92.9
OVERREPORTED 1	10.1	19.2	4.8	14.0	9.2	8.9	.18	.18	.05
2	2.9	5.2	1.6	4.8	6.8	3.1	.63	1.5	.28
3	1.1	1.9	.59	1.6	2.2	1.0	1.2	3.0	.36
4+	.65	1.3	.35	1.2	1.8	.78	0.5	17.8	1.9
	100.0 (N=145,897)	100.0 (N=52,901)	100.0 (N=91,145)	100.0 (N=68,699)	100.0 (N=3,242)	100.0 (N=37,470)	100.0 (N=75,368)	100.0 (N=21,660)	100.0 (N=53,749)

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TABLE B.10: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE BY BEOG-REPORTED INCOME RANGES - ALL SUPPLEMENTAL APPLICANTS

Discrepancies in Household Size	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
	BEOG Reported Adjusted Gross Income									
-4	.1	.3	.1	0.0	0.0	.2	.3	0.0	0.0	0.0
-3	.1	.1	.1	0.0	.1	.2	.2	0.0	0.0	0.0
-2	.4	.6	.6	.1	.6	.5	.3	.2	0.0	0.2
-1	4.0	4.7	3.3	4.1	3.8	3.6	4.6	3.2	3.8	5.3
0	80.7	77.8	83.5	88.6	77.4	75.1	74.0	71.7	72.4	72.7
1	10.1	10.1	7.7	4.8	12.0	14.6	15.1	17.8	18.2	15.9
2	2.9	3.7	3.3	1.5	4.0	3.5	3.1	5.1	2.3	3.0
3	1.1	1.3	.8	.5	1.6	1.6	1.1	.9	2.2	1.5
4	.6	1.4	.6	.3	.6	.7	1.1	.8	.6	1.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=143,897)	(N=17,432)	(N=11,719)	(N=48,427)	(N=24,323)	(N=16,950)	(N=9,602)	(N=6,288)	(N=4,022)	(N=5,332)

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TABLE B.11: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE BY BEOG-REPORTED INCOME RANGES - ELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

Discrepancies in Household Size	Total %	BEOG Reported Adjusted Gross Income: Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
4+	.2	.2	.1	.1	0.0	.4	.2	0.0	0.0	0.0
3	.1	.1	.1	.1	.1	.3	0.0	0.0	0.0	0.0
2	.5	.6	.5	.3	.6	.5	.5	0.0	0.0	0.0
1	4.0	4.3	3.2	4.3	4.2	3.7	4.2	2.2	1.7	0.0
0	75.6	77.6	82.5	72.3	70.4	69.6	69.2	64.3	64.9	50.7
1	14.0	10.5	8.6	15.2	15.8	17.7	16.6	22.3	19.1	20.7
2	4.8	3.9	3.4	4.9	5.9	4.9	5.1	6.6	8.8	11.9
3	1.6	1.4	.9	1.6	1.9	1.9	1.8	2.1	2.4	8.0
4+	1.3	1.6	.7	.9	1.0	.9	2.2	1.9	0.0	0.0
	100.0 (N=68,699)	100.0 (N=15,292)	100.0 (N=9,798)	100.0 (N=13,456)	100.0 (N=14,321)	100.0 (N=8,773)	100.0 (N=4,258)	100.0 (N=2,022)	100.0 (N=598)	100.0 (N=198)

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TABLE B.12: DISCREPANCIES IN BEOG-REPORTED HOUSEHOLD SIZE BY BEOG-REPORTED INCOME RANGES - INELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

		BEOG Reported Adjusted Gross Income								
Discrepancies in Household Size	Total	Less than 1,000	1,000 1,999	2,000 3,999	4,000 6,999	7,000 9,999	10,000 12,499	12,500 14,999	15,000 17,499	17,000 or more
	%	%	%	%	%	%	%	%	%	%
CPS>BEOG +4	0.0	.5	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0
+3	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0
+2	.2	.9	1.1	0.0	.0	.5	0.0	0.0	0.0	0.2
+1	4.1	7.5	3.6	4.1	3.1	3.5	4.9	3.7	4.2	5.1
0	87.1	79.6	88.9	94.8	87.5	81.1	77.9	75.7	73.7	73.6
BEOG>CPS -1	6.5	7.6	2.9	.8	6.4	11.3	14.0	15.7	18.0	15.7
-2	1.2	2.1	2.6	.2	1.1	1.9	1.6	4.8	1.2	2.7
-3	.6	1.1	.5	.1	1.1	1.3	.7	.3	2.2	1.5
-4	.1	0.0	0.0	0.0	0.0	.2	.2	.2	0.0	0.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=75,368)	(N=2,140)	(N=1,921)	(N=34,941)	(N=10,002)	(N=8,178)	(N=5,344)	(N=4,267)	(N=3,425)	(N=5,151)

TABLE B.13: DISCREPANCIES IN BEOG-REPORTED FEDERAL TAX EXEMPTIONS BY ELIGIBILITY AND DISCREPANCY STATUS - SUPPLEMENTAL APPLICANTS

Discrepancies in Personal Tax Exemptions	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
IRS>BEOG 4+	.17	.27	.1	.26	.37	.17	.07	.12	.03
3	.18	.22	.16	.30	.33	.29	.07	.06	.08
2	.74	1.1	.53	1.1	1.4	.85	.41	.66	.31
1	7.0	4.4	8.5	7.1	4.6	9.2	6.9	4.2	8.0
0	77.09	64.9	84.1	70.0	62.7	77.7	82.7	68.1	88.6
BEOG>IRS 1	10.6	21.3	4.4	13.9	21.2	7.8	7.6	21.4	2.0
2	2.7	5.1	1.3	4.1	5.9	2.5	1.5	3.8	.51
3	.96	1.6	.56	1.4	1.9	.87	.59	1.20	.34
4+	.61	1.1	.34	1.0	1.5	.68	.22	.52	.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=143,892)	(N=52,901)	(N=91,140)	(N=68,694)	(N=31,242)	(N=37,465)	(N=75,368)	(N=21,660)	(N=53,719)

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TABLE B.14: DISCREPANCIES IN BEOG-REPORTED FEDERAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - ALL SUPPLEMENTAL APPLICANTS

Discrepancies in Personal Tax Exemptions	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,000 or more %
	BEOG Reported Adjusted Gross Income									
IRS>BEOG 4+	.2	.4	.2	0.0	.1	.2	.3	0.0	0.0	0.0
3	.2	.1	.3	.1	.2	.4	.3	.2	0.0	0.0
2	.7	.8	.9	.3	1.1	1.2	1.0	1.1	.8	.5
1	7.0	5.8	5.7	8.0	7.8	6.9	6.7	4.2	5.1	7.1
0	77.1	76.5	80.9	84.8	71.7	69.6	70.7	70.2	70.0	72.7
BEOG>IRS 1	10.6	10.5	7.4	4.6	13.1	16.4	16.2	17.8	20.1	16.2
2	2.7	3.4	3.2	1.3	4.1	3.1	2.6	4.8	1.8	2.1
3	1.0	1.4	.7	.6	1.2	1.5	.9	1.0	1.3	.4
4+	.6	1.1	.5	.2	.6	.7	1.1	.7	0.0	.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=143,892)	(N=17,427)	(N=11,719)	(N=48,427)	(N=24,323)	(N=16,950)	(N=9,602)	(N=6,288)	(N=4,022)	(N=5,532)

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TABLE B.15: DISCREPANCIES IN BEOG-REPORTED FEDERAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - ELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

Discrepancies in Personal Tax Exemptions	Total	BEOG Reported Adjusted Gross Income: Less than 1,000	1,000 1,999	2,000 3,999	4,000 6,999	7,000 9,999	10,000 12,499	12,500 14,999	15,000 17,499	17,000 or more
	%	%	%	%	%	%	%	%	%	%
IRS>BEOG 4+	.2	.3	.2	.1	.1	.4	.2	0.0	0.0	0.0
3	.3	.2	.3	.4	.3	.4	.3	.5	0.0	0.0
2	1.1	.8	.9	.8	1.4	1.5	1.6	2.0	0.0	0.0
1	7.1	5.7	5.9	9.0	9.4	6.7	4.9	3.8	5.4	0.0
0	70.9	76.7	80.0	68.4	65.2	65.9	68.3	68.0	66.6	57.5
BEOG>IRS 1	13.9	10.4	7.8	14.5	16.0	19.1	17.5	18.4	18.0	18.5
2	4.1	3.4	3.5	4.3	5.2	3.9	3.2	4.1	5.4	9.7
3	1.4	1.4	.8	1.6	1.5	1.2	1.4	1.8	0.0	0.0
4+	1.0	1.2	.6	.8	1.0	.8	2.2	1.4	0.0	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(N=68,694)	(N=15,287)	(N=9,798)	(N=13,456)	(N=14,321)	(N=8,773)	(N=4,258)	(N=2,022)	(N=596)	(N=198)

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TABLE B.16: DISCREPANCIES IN BEOG-REPORTED FEDERAL TAX EXEMPTIONS BY BEOG-REPORTED INCOME RANGES - INELIGIBLE SUPPLEMENTAL APPLICANTS ONLY

Discrepancies in Personal Tax Exemptions	Total	BEOG Reported Adjusted Gross Income: Less than 1,000	1,000 1,999	2,000 3,999	4,000 6,999	7,000 9,999	10,000 12,499	12,500 14,999	15,000 17,499	17,000 or more
	%	%	%	%	%	%	%	%	%	%
3+	0.0	.6	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0
3	.1	0.0	0.0	0.0	0.0	0.5	.2	0.0	0.0	0.0
2	.4	1.1	.8	.1	.8	.8	.5	.6	.8	.5
1	6.0	6.7	4.8	7.6	5.7	7.0	8.1	4.3	5.0	7.2
0	82.7	75.2	85.6	91.1	81.0	73.7	72.5	71.2	70.6	73.5
1	7.6	11.2	5.5	.8	8.9	13.5	15.1	17.6	20.5	16.1
2	1.5	3.0	2.6	.2	2.6	2.3	2.2	5.2	1.2	1.8
3	.6	1.5	0.0	.2	.9	1.7	.6	.6	1.5	.5
4+	.5	0.0	0.0	0.0	.1	.5	.2	.2	0.0	0.6
	100.0 (N=75,368)	100.0 (N=2,140)	100.0 (N=1,921)	100.0 (N=34,971)	100.0 (N=10,002)	100.0 (N=8,178)	100.0 (N=5,344)	100.0 (N=4,267)	100.0 (N=3,425)	100.0 (N=5,151)

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TABLE B.17: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA BY ELIGIBILITY AND DEPENDENCY STATUS - SUPPLEMENTAL APPLICANTS

Eligibility Index Discrepancies	All Applicants			Eligible Applicants			Ineligible Applicants		
	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %	Total %	Dependent %	Independent %
-801	31.20	23.83	35.44	26.75	22.23	30.51	35.20	26.14	38.85
501-800	11.38	11.29	11.4	11.31	10.87	11.66	11.41	11.91	11.21
201-500	16.1	17.3	15.3	15.0	16.8	13.5	17.0	18.0	16.6
51-200	9.4	11.6	8.0	10.0	13.0	7.5	8.7	9.7	8.4
+50	15.4	17.8	14.0	26.8	24.7	28.6	4.9	7.8	3.8
51-200	2.8	4.5	1.8	3.6	4.7	2.6	4.0	1.7	4.9
201-500	5.48	5.39	2.36	3.6	4.53	2.81	3.48	7.14	2.00
501-800	3.85	3.35	4.15	2.08	2.32	1.89	5.36	6.63	2.85
-801	6.67	4.97	7.66	.89	.79	.97	11.93	11.01	12.30
	100.0 (N=143,932)	100.0 (N=52,936)	100.0 (N=91,195)	100.0 (N=68,735)	100.0 (N=31,277)	100.0 (N=37,370)	100.0 (N=75,368)	100.0 (N=21,660)	100.0 (N=53,119)

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TABLE B.18: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME RANGES[1/] - ALL SUPPLEMENTAL APPLICANTS

		BEOG Reported Adjusted Gross Income									
Eligibility Index Discrepancies	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG: 801	31.2	36.4	33.2	37.9	25.5	25.0	24.2	25.1	23.8	19.6
IRS>BEOG: 501-800	11.4	10.3	12.2	11.7	10.3	10.6	12.8	10.8	16.9	11.3
IRS>BEOG: 201-500	16.1	12.9	14.8	16.1	15.6	17.2	18.1	19.7	18.3	16.7
IRS>BEOG: 51-200	9.4	7.1	7.9	7.9	10.4	12.9	12.6	9.5	8.6	15.5
IRS>BEOG: ±50	15.4	31.9	24.3	10.9	19.0	11.1	7.7	6.5	5.9	10.9
BEOG>IRS: 51-200	2.8	0.7	2.4	0.9	4.0	5.5	5.0	6.0	4.8	2.8
BEOG>IRS: 201-500	3.5	.3	3.5	1.2	4.9	5.9	7.4	8.7	5.7	5.7
BEOG>IRS: 501-800	3.9	.1	1.5	5.7	4.8	4.2	4.8	4.8	4.8	5.9
BEOG>IRS: 801	6.7	.2	.5	8.1	6.4	7.7	8.5	9.8	12.8	15.8
	100.0 (N=143,932)	100.0 (N=17,608)	100.0 (N=11,719)	100.0 (N=48,407)	100.0 (N=24,323)	100.0 (N=16,966)	100.0 (N=9,602)	100.0 (N=6,288)	100.0 (N=4,022)	100.0 (N=5,552)

[1/] Substitution involved adjusted gross income and federal tax data only.

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TABLE B.19: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA, FOR BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME RANGES[1/] - ELIGIBLE SUPPLEMENTAL APPLICANTS

		BEOG Reported Adjusted Gross Income									
Eligibility Index Discrepancies		Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG	>801	26.7	34.6	33.6	24.1	22.2	21.8	21.8	20.6	17.6	9.6
	501-800	11.4	10.4	12.0	10.4	10.8	12.2	14.2	13.6	14.2	
	201-500	15.0	12.1	14.3	12.9	15.2	18.6	20.5	22.4	25.7	22.8
	51-200	10.0	6.9	7.3	8.7	11.3	14.6	13.4	15.7	15.7	19.8
	±50	26.8	34.9	26.0	35.2	27.3	14.7	9.6	7.1	5.5	15.6
BEOG>IRS	51-200	3.6	0.7	2.4	2.8	5.0	6.6	6.1	6.1	7.8	5.0
	201-500	3.5	.3	3.1	2.7	4.4	6.3	8.1	8.1	7.1	10.0
	501-800	2.1	.1	1.3	2.1	2.8	3.6	4.4	3.7	0.0	4.5
	>801	.9	.1	0.0	1.0	1.1	1.7	2.0	2.7	2.4	1.5
		100.0 (N=68,735)	100.0 (N=15,298)	100.0 (N=9,798)	100.0 (N=13,969)	100.0 (N14,321)	100.0 (N=8,789)	100.0 (N=4,258)	100.0 (N=2,022)	100.0 (N=596)	100.0 (N=198)

[1/] Substitution involved adjusted gross income and federal tax data only

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TABLE B.20: DISCREPANCIES IN STUDENT ELIGIBILITY INDICES SUBSTITUTING IRS DATA FOR BEOG-REPORTED DATA, BY BEOG-REPORTED INCOME RANGES[1/] - INELIGIBLE SUPPLEMENTAL APPLICANTS

		BEOG Reported Adjusted Gross Income									
Eligibility Index Discrepancies	Total %	Less than 1,000 %	1,000 1,999 %	2,000 3,999 %	4,000 6,999 %	7,000 9,999 %	10,000 12,499 %	12,500 14,999 %	15,000 17,499 %	17,500 or more %
IRS>BEOG >801	35.2	49.3	31.1	43.2	30.2	28.4	26.1	27.2	24.9	20.0
IRS>BEOG 501-800	11.5	9.7	13.1	12.2	9.4	8.9	11.8	9.5	17.4	11.4
IRS>BEOG 201-500	17.0	18.7	17.6	17.3	16.2	15.9	16.3	18.4	17.0	16.5
IRS>BEOG 51-200	8.7	8.9	10.6	7.6	9.0	11.0	11.8	6.6	7.4	11.0
IRS>BEOG <50	4.9	10.8	16.1	1.5	7.2	7.2	6.6	6.2	5.9	10.7
BEOG>IRS 51-200	4.0	0.6	2.9	0.3	2.7	4.2	4.2	5.9	4.2	2.7
BEOG>IRS 201-500	3.3	.9	4.9	.6	5.6	5.3	6.7	9.0	5.4	5.5
BEOG>IRS 501-800	5.5	0.0	1.9	6.5	5.7	4.8	3.6	4.1	4.4	6.0
BEOG>IRS >801	11.9	.8	1.6	10.9	14.0	14.3	13.3	13.1	13.6	16.3
	100.0 (N=75,368)	100.0 (N=2,140)	100.0 (N=1,921)	100.0 (N=34,971)	100.0 (N=10,017)	100.0 (N=8,178)	100.0 (N=5,344)	100.0 (N=4,267)	100.0 (N=3,426)	100.0 (N=5,134)

[1/] Substitution involved adjusted gross income and federal tax data only

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APPENDIX C

DETAILED IRS/BEOG MATCH RATE BY SAMPLING STRATUM

TABLE C.1: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR REGULAR APPLICANTS

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Regulars Eligible Overall	2,171,715	497,255	22.89%	181,960	8.38%	1,492,911	68.74%
< $ 1,000	727,736	283,510	38.96	49,172	6.76	395,097	54.29
$ 1,000- 1,999	156,099	21,096	13.51	11,967	7.66	123,038	78.82
$ 2,000- 3,999	262,375	48,223	18.38	26,923	10.26	187,317	71.39
$ 4,000- 6,999	374,699	65,514	16.60	41,314	11.03	267,978	71.52
$ 7,000- 9,999	290,631	40,687	13.99	29,328	10.09	220,783	75.97
$10,000-12,499	171,387	17,562	10.25	13,573	7.92	140,252	81.83
$12,500-14,999	105,433	10,129	9.61	5,784	5.48	89,520	84.91
$15,000-17,499	63,902	8,220	12.86	3,019	4.72	52,664	82.41
≥ $17,500	19,456	2,314	11.89	880	4.52	16,262	83.58
Regulars Ineligible Overall	1,085,775	101,345	9.33	52,649	4.85	930,257	85.68
< $ 1,000	35,823	9,747	27.21	1,226	3.42	24,811	69.26
$ 1,000- 1,999	14,459	865	5.98	487	3.37	13,108	90.66
$ 2,000- 3,999	67,786	2,351	3.47	2,821	4.16	62,616	92.37
$ 4,000- 6,999	99,901	7,280	7.29	4,696	4.70	87,926	88.01
$ 7,000- 9,999	100,833	12,665	12.56	7,210	7.15	80,969	80.30
$10,000-12,499	100,030	13,901	13.89	7,065	7.06	77,535	77.51
$12,500-14,999	136,642	15,553	11.38	7,207	5.27	113,890	83.35
$15,000-17,499	148,105	13,395	9.04	7,172	4.84	127,546	86.12
≥ $17,500	382,176	25,598	6.70	14,725	3.85	341,856	89.45

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TABLE C.2: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR REGULAR ELIGIBLES

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Dependents Overall	1,367,875	320,934	23.46%	124,943	9.13%	922,190	67.42%
Depn < $ 1,000	316,313	168,530	53.28	24,514	7.75	123,292	38.97
" $ 1,000- 1,999	147,562	11,607	24.40	5,427	11.41	30,529	64.19
" $ 2,000- 3,999	139,718	31,500	22.54	17,514	12.53	90,707	64.92
" $ 4,000- 6,999	260,662	42,928	16.47	29,894	11.47	187,840	72.06
" $ 7,000- 9,999	249,141	30,393	12.20	24,655	9.89	194,257	77.97
" $10,000-12,499	166,488	15,710	9.43	13,287	7.98	137,491	82.59
" $12,500-14,999	104,781	9,815	9.37	5,758	5.49	89,208	85.14
" $15,000-17,499	63,798	8,155	12.78	3,016	4.72	52,628	82.49
" ≥ $17,500	19,412	2,296	11.82	878	4.52	16,238	83.65
Independents Overall	803,840	176,321	21.93	57,017	7.09	570,721	70.99
Indepen < $ 1,000	411,423	114,980	27.94	24,658	5.99	271,809	66.06
" $ 1,000- 1,999	108,537	9,489	8.54	6,540	6.02	92,509	85.13
" $ 2,000- 3,999	122,657	16,723	13.63	9,409	7.67	96,610	78.76
" $ 4,000- 6,999	114,034	22,586	19.80	11,420	10.01	80,138	70.27
" $ 7,000- 9,999	41,490	10,294	24.81	4,673	11.26	26,526	63.99
" $10,000-12,499	4,899	1,852	3.78	286	5.83	2,761	56.36
" $12,500-14,999	652	314	48.15	26	3.98	312	47.88
" $15,000-17,499	104	65	6.25	3	2.88	36	34.62
" ≥ $17,500	44	18	40.90	2	4.54	24	54.54

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TABLE C.3: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR REGULAR INELIGIBLES

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Dependents Overall	760,442	44,399	5.83%	32,576	4.28%	683,470	89.87%
Depn < $ 1,000	9,097	3,695	40.62	526	5.78	4,877	53.61
" $ 1,000- 1,999	2,309	271	11.73	117	5.07	1,921	83.20
" $ 2,000- 3,999	8,972	561	6.25	515	5.74	7,897	88.02
" $ 4,000- 6,999	24,177	1,816	7.51	1,064	4.40	21,298	88.09
" $ 7,000- 9,999	42,669	2,759	6.46	2,334	5.47	37,577	88.06
" $10,000-12,499	61,732	4,036	6.54	3,483	5.64	54,213	87.82
" $12,500-14,999	111,487	5,555	4.98	5,013	4.50	100,926	98.53
" $15,000-17,499	134,171	7,328	5.46	5,946	4.43	120,905	90.11
" ≥ $17,500	365,808	18,378	5.02	13,578	3.71	333,856	91.26
Independents Overall	325,333	56,946	17.50	20,073	6.17	246,787	75.86
Indepen < $ 1,000	26,726	6,052	22.64	740	2.76	19,934	74.58
" $ 1,000- 1,999	12,150	594	4.88	370	3.04	11,187	92.07
" $ 2,000- 3,999	58,814	1,790	3.43	2,306	3.92	54,719	93.03
" $ 4,000- 6,999	75,724	5,464	7.21	3,632	4.79	66,628	87.99
" $ 7,000- 9,999	58,164	9,896	17.01	4,876	8.38	43,392	78.60
" $10,000-12,499	38,298	9,865	25.76	3,582	9.35	23,322	60.90
" $12,500-14,999	25,155	9,998	39.75	2,194	8.72	12,964	51.15
" $15,000-17,499	13,934	6,067	43.54	1,226	8.80	6,641	47.66
" ≥ $17,500	16,368	7,220	44.11	1,147	7.00	8,000	48.88

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TABLE C.4: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR SUPPLEMENTAL APPLICANTS

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Supplemental Eligibles Overall	109,048	12,847	11.78%	6,876	6.31%	89,327	81.91%
< $ 1,000	29,258	4,036	13.79	1,539	5.26	23,683	80.94
$ 1,000- 1,999	12,783	1,000	7.82	732	5.72	11,051	86.44
$ 2,000- 3,999	18,791	2,067	10.99	1,430	7.61	15,295	81.39	
$ 4,000- 6,999	23,320	3,037	11.17	1,833	6.71	22,450	82.17
$ 7,000- 9,999	12,024	1,610	13.39	904	7.52	9,511	79.10
$10,000-12,499	5,381	663	12.32	251	4.66	4,466	82.99
$12,500-14,999	2,536	243	9.59	142	5.59	2,151	84.81
$15,000-17,499	668	122	18.26	30	4.49	516	77.24
≥ $17,500	257	66	25.68	12	4.67	205	79.76
Supplemental Ineligibles Overall	96,415	7,422	7.70	4,158	4.31	84,824	87.98
< $ 1,000	3,816	369	9.67	104	2.72	3,342	87.58
$ 1,000- 1,999	2,436	110	4.51	59	2.42	2,267	93.06
$ 2,000- 3,999	42,782	1,404	3.28	1,356	3.17	40,020	93.54
$ 4,000- 6,999	12,358	935	7.56	366	2.96	11,056	89.46
$ 7,000- 9,999	10,882	1,245	11.44	744	6.84	8,890	81.69
$10,000-12,499	7,692	1,342	17.45	595	7.73	5,755	74.82
$12,500-14,999	6,260	897	14.33	482	7.70	4,878	77.97
$15,000-17,499	3,804	522	13.72	174	4.57	3,107	81.68
≥ $17,500	6,385	598	9.36	278	4.35	5,509	86.28

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TABLE C.5: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR SUPPLEMENTAL ELIGIBLES

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Dependents Overall	52,148	6,706	12.86%	3,046	5.84%	42,396	81.29%
Depn < $ 1,000	7,831	1 894	24.18	510	6.51	5,425	69.27
" $ 1,000- 1,999	2,289	360	15.12	131	5.72	1,799	78.59
" $ 2,000- 3,999	6,342	846	13.39	493	7.77	5,004	78.90
" $ 4,000- 6,999	17,991	1,678	9.32	972	5.40	15,342	85.27
" $ 7,000- 9,999	9,125	942	10.32	529	5.79	7,655	83.89
" $10,000-12,499	5,084	553	10.87	227	4.46	4,303	84.64
" $12,500-14,999	2,531	242	9.56	142	5.61	2,147	84.83
" $15,000-17,499	668	122	18.26	30	4.49	516	77.24
" ≥ $17,500	287	69	24.04	12	4.18	205	71.42
Independents Overall	56,900	6,141	10.79	3,827	6.72	46,931	82.47
Indepen > $ 1,000	21,427	2,142	9.99	1,029	4.80	18,258	85.21
" $ 1,000- 1,999	10,494	640	6.10	601	5.72	9,251	88.15
" $ 2,000- 3,999	12,449	1,221	9.81	937	7.53	10,291	82.66
" $ 4,000- 6,999	9,329	1,359	14.56	861	9.23	7,108	76.19
" $ 7,000- 9,999	2,899	668	23.04	375	12.93	1,856	64.02
" $10,000-12,499	297	110	37.03	24	8.08	163	54.88
" $12,500-14,999	5	1	20.0	0	0	4	80.00
" $15,000-17,499	0	0	0	0	0	0	0
" ≤ $17,500	0	0	0	0	0	0	0

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TABLE C.6: DETAILED MATCH CHARACTERISTICS BY TYPE OF MATCH FOR SUPPLEMENTAL INELIGIBLES

Strata	Weighted Sample Size	No SSN Match		SSN Match Only		SSN and Name Match	
Dependents Overall	216,378	1,991	7.54%	1,117	4.23%	23,268	88.21%
Depn < $ 1,000	649	107	16.49	24	3.69	517	79.66
" $ 1,000- 1,999	281	26	9.25	9	3.22	246	87.54
" $ 2,000- 3,999	946	69	7.94	45	4.76	832	87.85
" $ 4,000- 6,999	2,684	211	7.86	43	1.60	2,430	90.54
" $ 7,000- 9,999	4,347	317	7.29	101	2.32	3,928	90.36
" $10,000-12,499	4,273	466	10.91	251	6.01	3,550	83.07
" $12,500-14,999	4,500	258	5.73	323	7.17	3,918	87.06
" $15,000-17,499	3,062	264	8.62	101	3.29	2,697	88.08
" ≥ $17,500	5,646	273	4.84	214	3.80	5,150	91.38
Independents Overall	70,037	5,431	7.75	3,041	4.34	61,556	87.89
Indepen < $ 1,000	3,167	262	8.27	80	2.53	2,825	89.20
" $ 1,000- 1,999	2,155	84	3.89	50	2.32	2,021	93.78
" $ 2,000- 3,999	41,836	1,335	3.19	1,311	3.13	39,188	93.67
" $ 4,000- 6,999	9,674	724	7.48	323	3.34	8,626	89.17
" $ 7,000- 9,999	6,535	928	14.20	623	9.84	4,962	75.93
" $10,000-12,499	3,419	876	25.62	338	9.89	2,205	64.49
" $12,500-14,999	1,760	639	36.30	159	9.03	960	54.54
" $15,000-17,499	742	258	34.77	73	9.84	410	55.26
" ≥ $17,500	749	325	43.39	64	8.54	359	47.93

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